TCD-D10

SERVICE MANUAL

AEP Model

SPECIFICATIONS

Refer to ACP-88 Service Manual issued previously for infomation of ac pack/battery charger ACP-88 supplied with this set.

Tape	Digital audio tape
Recording system	Rotary head
Recording time	120 minutes (with DT-120)
Tape speed	8.15 mm/s
Drum rotation	Approx. 2.000 rpm
Error correction	Double Reed Solomon code
Number of channel	2 channels, stereo
D/A conversion	16-bit linear
Fequency response	20–22.000 Hz (±1 dB)
Signal-to-noise ratio	More than 85 dB
Dynamic range	More than 90 dB (at 1 kHz)
Total harmonic distortion	Less than 0.008% (at 1 kHz)
Wow and flutter	Below measurable limit

Input

Input jacks	Jack type	Impedance	Minimum input level
LINE IN	Phono × 2	50 kohms	35 mV
MICROPHONE	Phone × 2	for low impedance microphone	0.3 mV

Output

Output jacks	Jack type	Impedance	Rated Output	Load impedance
LINE OUT	Phono × 2	470 ohms	0.25 V	more than 10 kohms
HEADPHONES	Stereo phone	150 ohms	0 to 18 mV	32 ohms

Tape

Track pitch	13.6 μm (20.4 μm)
Sampling frequency	for playback: 48 kHz, 44.1 kHz, 32 kHz for recording: 48 kHz
Modulation system	8—10 Modulation
Transfer rate	2.46 Mbit/sec. (before modulation)

Model Name Using Similar Mechanism	DTC-1000ES
Tape Transport Mechanism Type	DATM-02

General

Power requirements	6 V in DC operation 100–240 V AC, 50/60Hz using the AC pack (supplied)
Battery life	Approx. 2 hours of continous recording with the supplied NP-22H battery pack fully-charged
Power consumption	6.5 W using NP-22H
Speaker	Full range: 50 mm dia., cone type
Power output	200 mW in DC operation
Dimensions	Approx. 253 × 55 × 191 mm (10 × 2 1/4 × 7$^5/_8$ inches) (w/h/d) excluding projecting parts and controls
Weight	Approx. 1.8 kg (4 lbs) including batteries Approx. 1.5 kg (3 lbs 5 oz) excluding batteries

—Continued on page 2—

DIGITAL AUDIO TAPE CORDER

SONY®

MICROFILM

Microphone (supplied)

Type	Electret condenser microphone (with back-electret condenser capsules)
Microphone output connector	Phone plugs (2)
Dimensions	Approx. 30 × 175 mm ($1\,^{3}/_{16}$ × 7 inches) (outside diameter × length)
Weight	Approx. 216 g (7.7 oz) including batteries
Frequency response	50 Hz — 18,000 Hz
Directivity	Directive angle: Selectable between 90° and 120°
Output impedance	550 ohms ± 20%, unbalanced
Output level (at directive angle 120°)	Open circuit output voltage: 68 dB, ± 3 dB 0 dB = 1 V / 1 μ bar, 1000 Hz Recommended load impedance more than 3 kohms
Power requirements	R6 (size AA) battery Normal operating voltage: 1.5 V Minimum operating voltage: Approx. 1.1 V
Battery life	Approx. 2500 hours of continous operation with Sony SUM-3 (NS)battery
Noise level (at directive angle 120°)	Signal-to-noise ratio: More than 49 dB (1000 Hz, 1 μ bar) Inherent noise**: Less than 25 dB SPL (0 dB SPL = $2 \times 10^{-4}\mu$ bar) Wind noise* (with wind screen): Less than 45 dB SPL Induction noise from external magnetic field**: Less than 10 dB SPL * Wind noise is the value measured by applying a wind velocity of 2 m / sec. (6.6 ft / sec.) from all directions to the microphone. The mean value is taken and converted to the equivalent input sound level. ** The external magnetic field induction noise is measured with the microphone placed in an alternating magnetic field of 50 Hz, 1 milligauss. The maximum noise value is taken and then coverted to the equivalent input sound level.
Maximum sound pressure level	More than 117 dB SPL
Dynamic range	More than 92 dB

Accessories supplied

Remote controller (1)
Microphone (with wind screen and microphone holder) (1)
Carrying case (1)
Shoulder strap (1)
AC pack ACP-D10 (1)
Battery charge adaptor BC-D10 (1)
Battery pack NP-22H (1)
Lithium battery CR2025 (1)
Sony battery SUM-3 (NS) for microphone (1)
DAT cassette tape
Connecting cord (two phono plugs ←→ two phono plugs) (2)

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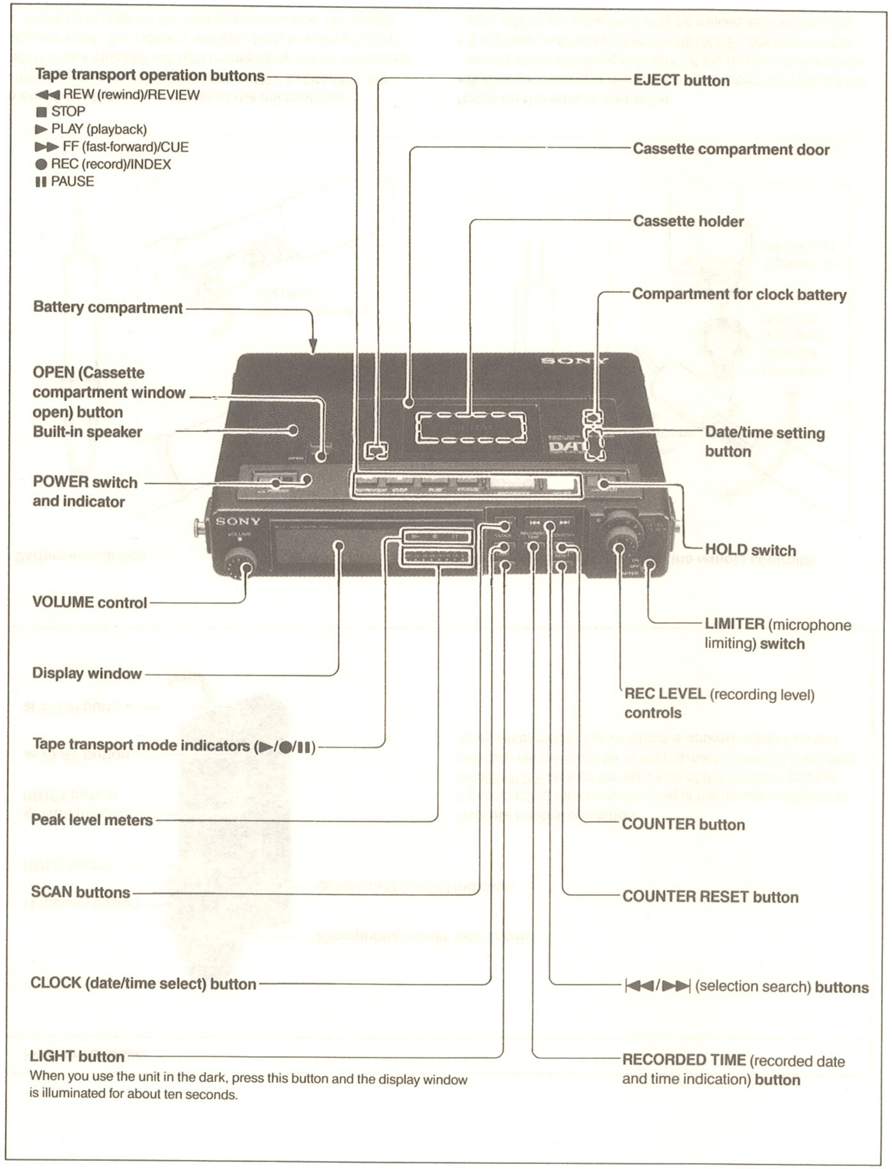
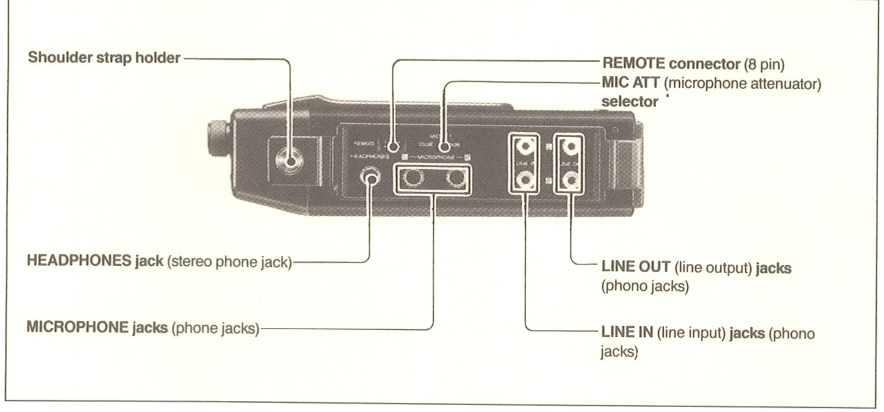
SECTION 1
GENERAL

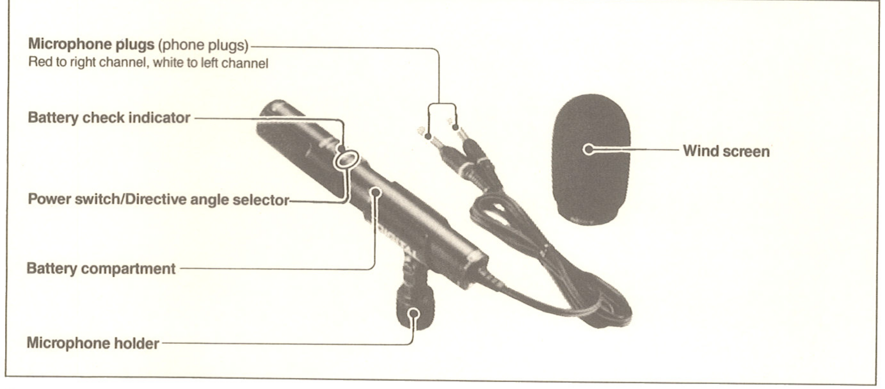
1-1. LOCATION OF PARTS AND CONTROLS


Tape transport operation buttons
◀◀ REW (rewind)/REVIEW
■ STOP
▶ PLAY (playback)
▶▶ FF (fast-forward)/CUE
● REC (record)/INDEX
❚❚ PAUSE
EJECT button
Cassette compartment door
Cassette holder
Battery compartment
Compartment for clock battery
OPEN (Cassette compartment window open) button
Built-in speaker
Date/time setting button
POWER switch and indicator
HOLD switch
VOLUME control
LIMITER (microphone limiting) **switch**
Display window
REC LEVEL (recording level) **controls**
Tape transport mode indicators (▶/●/❚❚)
Peak level meters
COUNTER button
SCAN buttons
COUNTER RESET button
CLOCK (date/time select) button
|◀◀/▶▶| (selection search) **buttons**
LIGHT button
When you use the unit in the dark, press this button and the display window is illuminated for about ten seconds.
RECORDED TIME (recorded date and time indication) **button**

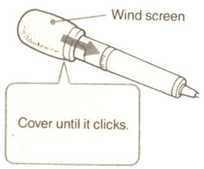
Right side


Shoulder strap holder
REMOTE connector (8 pin)
MIC ATT (microphone attenuator) **selector**
HEADPHONES jack (stereo phone jack)
LINE OUT (line output) **jacks** (phono jacks)
MICROPHONE jacks (phone jacks)
LINE IN (line input) **jacks** (phono jacks)

Microphone (supplied)

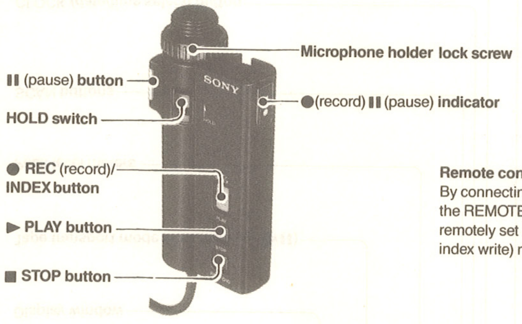

Microphone plugs (phone plugs)
Red to right channel, white to left channel
Battery check indicator
Wind screen
Power switch/Directive angle selector
Battery compartment
Microphone holder

Attaching the wind screen
The wind screen reduces wind or breath noise.


Wind screen
Cover until it clicks.

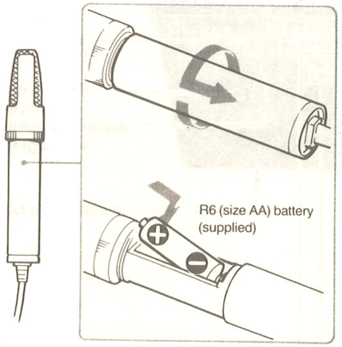
Notes on using the supplied microphone
- The microphone should never be dropped or otherwise subjected to extreme shock.
- Keep the microphone away from extremely high temperatures (above 60°C or 140°F).
- If the microphone is placed near loudspeakers, a howling effect (acoustic feedback) may occur. If this happens, change the direction of the microphone until the howling stops, or decrease the sound volume of the loudspeakers.

Remote controller

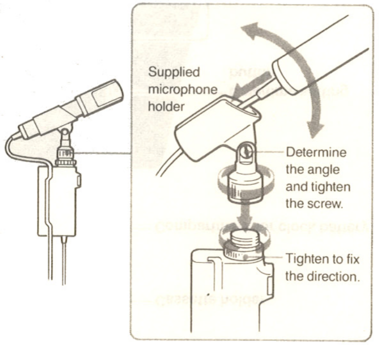

Microphone holder lock screw
II (pause) button
●(record) II (pause) indicator
HOLD switch
● REC (record)/ INDEX button
▶ PLAY button
■ STOP button
SONY

Remote control operation
By connecting the connector plug of the remote controller to the REMOTE jack on the right side of the recorder, you can remotely set the recorder in the playback or record (including index write) mode. (Cable length is approximately 1 meter.)

Battery installation


R6 (size AA) battery (supplied)

Attaching the microphone to the remote controller


Supplied microphone holder
Determine the angle and tighten the screw.
Tighten to fix the direction.

To check the battery condition of the microphone
When the power switch is moved from OFF to ON (90°), the battery check indicator will light momentarily. When the battery becomes weak, the indicator will light dimly or will not light at all. In this case, replace the battery with new one. For battery life, see Specifications on page 22.

Notes on the remote controller
- Before connecting or disconnecting the connector plug of the remote controller, be sure to turn off the power of the recorder.
- If anything metallic touches the REMOTE connector on the right side of the recorder, it may be treated as a remote control signal and so the operating mode may change unexpectedly.

1-2. REPAIR CHECK POINTS AND CAUTIONS

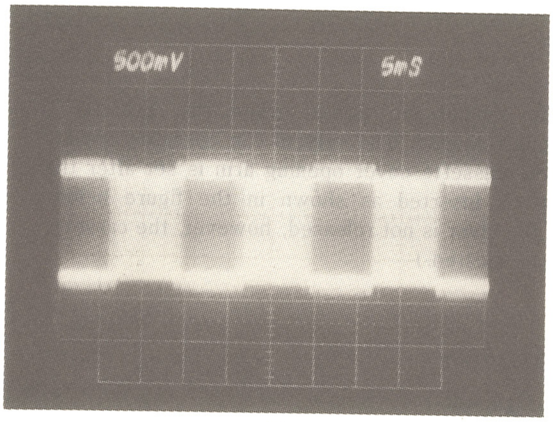
1. When the TCD-D10 contains a chargeable battery, power is supplied to IC507 only. When the POWER switch is pressed, power is supplied to the LED or LCD display. When the PLAY switch is pressed, power is supplied to the MD block.

2. For troubleshooting, put the set into test mode 2 and check that the power clock oscillates.

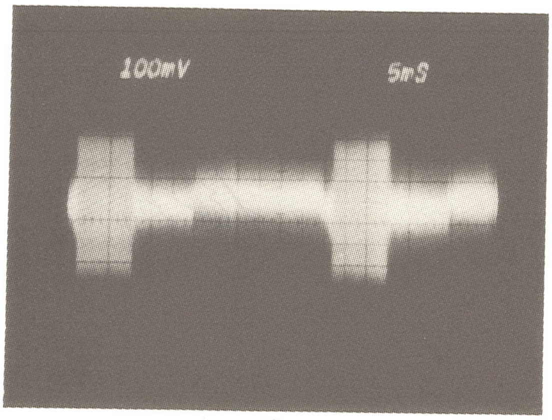
3. When power is not applied after the POWER switch is pressed, assume that power is not supplied to IC507, a reset signal is supplied to pin ⑦ of IC507, or the POWER switch is defective. (Power is turned on or off whenever the signal at pin ㊹ of IC507 goes low.)

4. The system is normal if the amplitude at TP52l exceeds 220mVp-p when the FF button is pressed with alignment tape TY-7251 loaded in test mode 1.
If the amplitude is less than 220mVp-p, assume that the head is drity or the RF block is defective.

5. The RF block is normal if signal Ⓐ is sent to pin ㊻ of IC529 and signal Ⓑ exceeding 110mV is output to TP520.



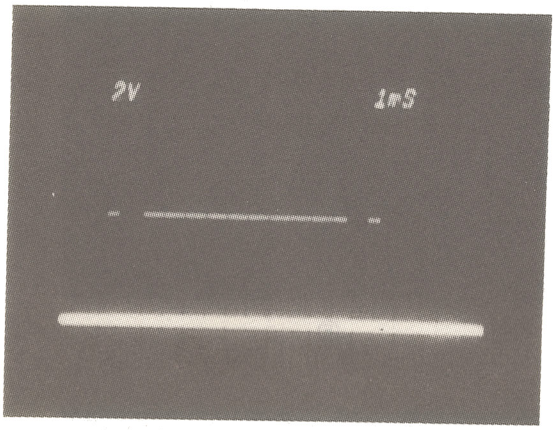
Ⓐ



Ⓑ

6. The RF amplifier (consisting of Q540 through Q542) is defective if a signal exceeding 110mV is sent to TP520 and a signal exceeding 220mV is not output to TP521. (The output ratio of TP521 and TP520 is 2 to 1.)

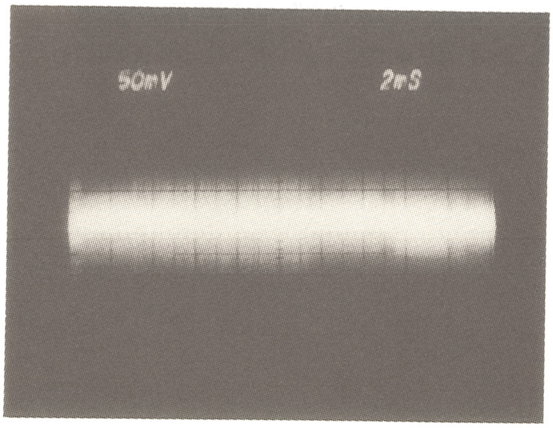
7. When VCO ir ATF is normal, a CRC pulse Ⓒ is output from pin ㊼ of IC502. The VCO or ATF can thus be checked using the pulse.



Ⓒ

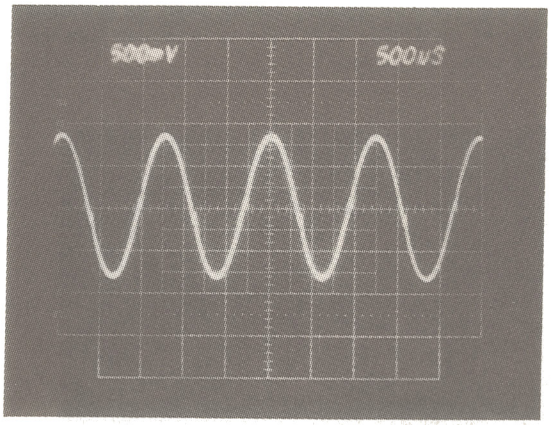
8. ATF is locked using IC515 when the signal at pin ⑩ of IC515 is low. When it is high, ATF is not locked.

9. The head is normal if signal Ⓓ appears when an oscilloscope is connected to the head output.



Ⓓ

10. The drum sensor is normal if drum FG signal Ⓔ (at pin ① of IC519) and drum PG signal Ⓕ (at pin ⑭ of IC519) appear as shown below.



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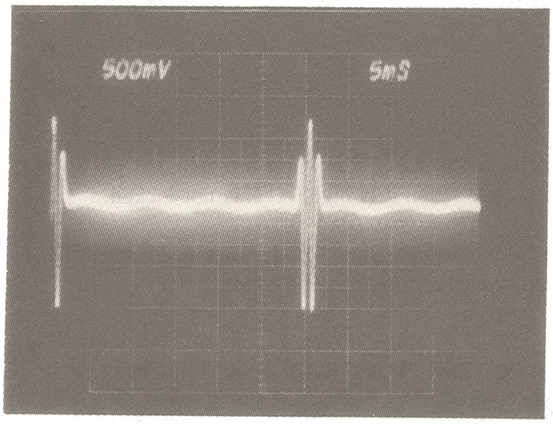
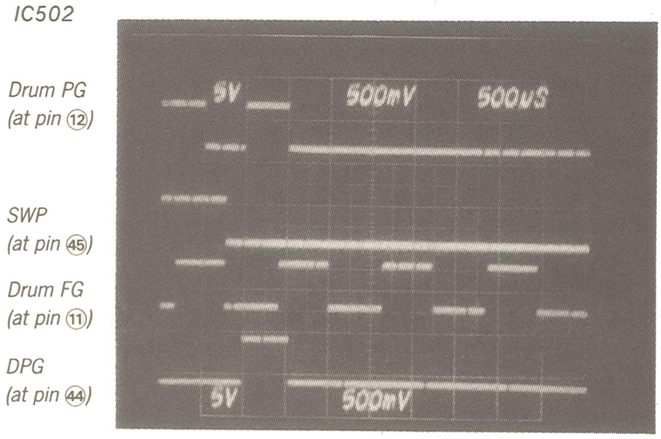


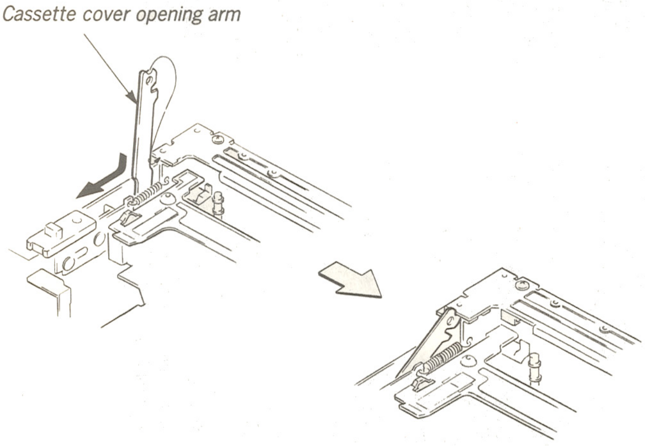
Ⓕ

11. The signal at pins ⑧ and ㉓ of IC502 goes high when the drum servo is normal.

12. An SWP signal (at pin ㊺ of IC502) is produced from a drum PG signal (pin ⑦ of IC520) and drum FG signal (at pin ① using IC502). A DPG signal (at pin ㊹ of IC502) is then produced from the SWP signal.



13. Cassette cannot be loaded when the TCD-D10's cabinet is removed. The system can operate normally when the cassette cover opening arm is set after the cassette is inserted as shown in the figure below. (When the lever is not released, however, the cassette cannot be ejected.)



1-3. TEST MODE

1. The test mode is entered when all power to the system is turned off (all power off) and test mode 1 or 2 on the main board is solder-bridged (see Fig. (1)).
2. The test mode is entered as soon as the POWER switch is turned on.
   (The normal mode is entered when the POWER switch is turned off in the test mode.)
3. The test mode is canceled and the normal mode is entered when the portion solder-bridged in Step 1 is open in the all power off mode and power is turned on.
4. The stop position is changed if power is turned on again in the all power off mode and the test mode is entered when the test mode is entered in the STOP mode. Put the set into the loading mode again.
5. All LCDs flash when test mode 1 is entered. The display is the same as in the normal mode when test mode 2 is entered.

Note: Be sure to return the set to the normal mode after repair.

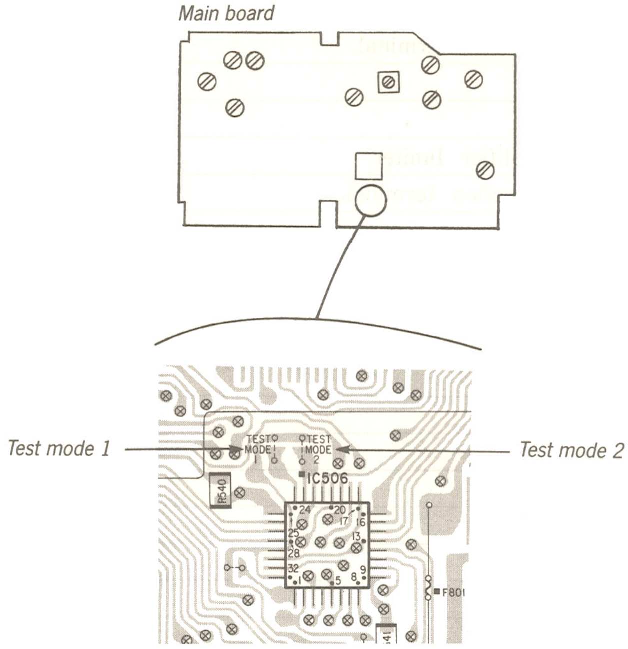


Fig. (1)

1-4. OPERATION IN TEST MODE

Test mode 1

Mode	Operation key
Loading	COUNTER
Unloading	CLOCK
×1.5	FF
−×1.5	REW
STOP	STOP

Test mode 2

Mode	Operation key
Loading	COUNTER
Unloading	CLOCK
CUE (×16)	Press the PLAY button in CUE (×2.5) mode.
REVIEW (−×16)	Press a PLAY button in REVIEW (−×2.5) mode.
REC	Press REC and PLAY buttons at the same time (not actually recorded).
Other operations are the same as in normal mode.	

1-5. IC'S PIN DESCRIPTION

IC401(CXA1045Q)

Pin No.	Symbol	Description
1	POATA	PB signal output terminal.
2	NC	
3	PLIM IN	PB limiter input terminal.
4	PLIM PC	PB limiter bypass capacitor connection terminal.
5	EQ OUT	PCM equalizer output terminal.
6	LOW	Resistor connection terminal which determines the PCM equalizer's low-range characterstics.
7	HIGH	Resistor connection terminal which determines the PCM's equalizer high-range characteristics.
8	PHASE	Resistor connection terminal which determines the PCM's equalizer phase characteristics.
9	P Vcc	Power terminal for PB and control logie systems other than head amplifier limiter.
10	EQ IN	PCM equalizer input terminal.
11	NC	
12	SW OUT	Switch amplifier output terminal for output from two channels.
13	B 2ND OUT	B-CH second RF amplifier output terminal.
14	B HCTL	Resistor connection terminal which determines the B-CH PB low-pass filter's cut-off frequency.
15	A 2ND OUT	A-CH second RF amplifier output terminal.
16	A HCTL	A-CH PB low-pass filter.
17	B PC2	B-CH second RF amplifier's bypass capacitor connector terminal.
18	REF PC	REF block bypass capacitor connection terminal.
19	NC	
20	P GND	GND terminal for PB syster other than head amplifier limiter.
21	A PC2	A-CH second RF amplifier's bypass capacitor connection terminal.
22	B RACTL	Usually not used.
23	B RAIN	B-CH REC AMP input terminal.
24	B RLV OUT	REC limiter control's B-CH output terminal.
25	B RA OUT	B-CH REC AMP output terminal.
26	B PIN	B-CH head amplifier input terminal.
27	B PC1	B-CH.
28	HA Vcc	Head amplifier's power terminal.
29	B HA OUT	B-CH head amplifier's output terminal.
30	HA GND	Head amplifier's GND terminal.
31	RA GND	REC amplifier's GND terminal.
32	A HA OUT	A-CH head amplifier's output terminal.
33	RA Vcc	REC amplifier's power terminal.
34	A PC1	A-CH head amplifier's bypass capacitor connection terminal.
35	A PIN	A-CH head amplifier's input terminal.
36	A RA OUT	A-CH REC amplifier's output terminal.
37	A RLV OUT	REC limiter control's A-CH output terminal.
38	A RAIN	A-CH REC amplifier's input terminal.
39	A RACTL	Usually not used.
40	AF REC	Logie terminal to entor the after-recording mode (not used in TCD-D10).
41	RP	Control terminal to designate REC and PB modes (H: REC, L: PB, Open: L).
43	LIM GND	GND terminal for PB and REC limiter controls.
44	SAG	REC sag compensation capacitor connection terminal.
45	LIM Vcc	Power terminal for PB and REC limiter controls.
46	RDATA IN	Terminal to input recorded data to a REC limiter controls.
47	BR VOL	REC limiter control's B-CH amplitude adjustment terminal.
48	AR VOL	REC limiter control's A-CH amplitude adjustment terminal.

IC502(CXD1052Q)

Pin No.	Symbol	Description
1	94M	Master clock input terminal (9.408MHz).
2	128K	Servo reference input terminal (12.8kHz).
3	XCLR	Rest input terminal. Reset by low level.
4	PCOT	Capstan phase comparison output terminal. A state output.
5	DVS2	Setting of voltage applied to the drum motor when servo is applied during SEARCH.
6	VSS	GND.
7	CFG	Capstan FG input terminal.
8	JTSP	Just speed monitor terminal. Set to the just speed in high level.
9	CFGO	Capstan FG output terminal.
10	DVS1	Setting of voltage applied to the drum motor when servo is applied during SEARCH.
11	DFG	Drum FG input terminal.
12	LPG	Drum PG input terminal.
13	SPPW	Speed servo PWM output terminal.
14	PHPW	Phase servo PWM output terminal.
15	BSPW	Bias servo PWM output terminal.
16	CREF	Capstan frequency reference output terminal (unused).
17	RFDT	RF signal input terminal. (The existence of a signal is indicated by the signal being "1" or "0". The result is input to IC.)
18	RFW	RF window output terminal. The RF signal is detected by low level.
19	VDD	+5V power terminal.
20	TST1	Test input terminal. Usually set to low.
21	TIO1	Test output terminal. Usually set to low.
22	XC16	Capstan mode select input terminal. Set to x16 mode by low level.
23	JSTL	Just lock monitor terminal. Just locked by high level.
24	TIN4	Test input terminal. Usually set to low.
25	TIN1	Test input terminal. Usually set to low.
26	ARST	Alarm cancel input terminal in SEARCH mode. Canceled by low level.
27	XDON	Drum ON/OFF select input terminal. Set to ON by low level.
28	TIN3	Test input terminal. Usually set to low.
29	TOU3	Test output terminal.
30	TOU3	Test output terminal.
31	VSS	GND.
32	TIO2	Test output terminal. Usually set to low.
33	XALM	Alarm output terminal in SEARCH mode. Alarmed by low level.
34	XVAR	External reference setting terminal (pin 2). Usuall set to high.
35	XREW	FF/REW setting terminal. Set to REW by low level.
36	XSER	SEARCH mode setting terminal. Set to SEARCH by low level.
37	DBRK	Drum brake output terminal. Brake set on by high level.
38	TOU1	Test output terminal.
39	TOU2	Test output terminal.
40	TIN5	Test input terminal. Usually fixed to low.
41	DREF	Drum PG reference input terminal.
42	TST2	Test input terminal. Usually set to low.
43	VDD	+5V power terminal.
44	DPG	Delay PG (DPG) input terminal.
45	SWP	Switching pulse output terminal.
46	PLLK	Drum lock monitor output terminal in SEARCH mode. Locked by high level.
47	CRC	CRC signal input terminal. CRC OK for high level.
48	RPCK	Reference input terminal in SEARCH mode.

IC507(μPD75108GF)

Pin No.	Symbol	Description
1	MUTE	Audio circuit's mute output.
2	PBLED	PB LED ON output.
3	PAULED	PAUSE LED ON output.
4	CLCK	Real-time clock IC's serial clock output.
5	CLSTB	Real-time clock IC's strobe output.
6	CLDO	Real-time clock IC's serial data output.
7	$\overline{\text{RESET}}$	Reset input.
8	X_2	Clock oscillation terminal.
9	X_1	Clock oscillation terminal.
10	KCK	Input expansion IC's serial clock output.
11	L/S	Input expansion IC's parallel load output.
12	SD 1	Input expansion IC's serial data output.
13	SD 0	Input expansion IC's serial data output.
14	LCDCK	LCD driver's serial clock output.
15	CS	LCD driver's chip select output.
16	C/D	LCD driver's command/data select output.
17	LCDD	LCD driver data output.
18	DTCTL 1	Subcode data control output 1.
19	DTCTL 2	Subcode data control output 2.
20	BL	Back-light control.
21	ALMRES	CXD1052Q's drum defect reset output (in SEARCH only).
22	XREW	Tape transport output.
23	XDON	Drum servo ON/OFF control output.
24	XSER	SEARCH mode output to drum servo.
25	XC16	Capstan servo constant select output in ×16 mode.
26	V_{SS}	
27	CLDI	Serial data input from real-time clock IC
28	SBSY	Subcode sync.
29	REELS	Reel motor FG's supply input.
30	REELT	Reel motor FG's take-up input.
31	ATD 1	PB ATF signal.
32	RF	PB output detection input.
33	XALM	Drum defect in SEARCH mode.
34	BATT	Battery voltage detection input.
35	CDIRI	Flag input to reverse the capstan rotation.
36	GND	
37	POWO	DD converter power ON/OFF output.
38	EMP	Emphasis control output.
39	RECLED	REC LED ON output.
40	RES	System reset output.
41	SUBDTI	Playback subcode data input.
42	SUBDTO	Subcode data output from microcomputer in REC mode.
43	EXCK	Subcode data output from microcomputer.
44	POWI	Power switch.
45	PAUSE	PAUSE mode output.
46	CPH	Capstan motor's phase servo ON/OFF output.
47	CMON	Capstan motor ON/OFF control output.

Pin No.	Symbol	Description
48	CDIRO	Capstan motor rotation output.
49	TREG	ON/OFF output for tension regulator and D/A output select control.
50	RCK	D/A converter's serial clock output.
51	RSTB	D/A converter's strobe output.
52	RDT	D/A converter's serial data output.
53	XTLOCK	Take-up reel lock in load/unload mode.
54	ATFON	ATF control output.
55	PLG−	Brake on.
56	PLG+	Brake release.
57	NC	
58	V_{DD}	
59	SWP	Drum PG signal.
60	END T/S	Take-up sensor input for tape end detection.
61	LEDS	End detection LED ON output at supply reel.
62	LEDT	End detection LED ON output at take-up reel.
63	UNLOAD	Tape loading motor's reverse output.
64	LOAD	Tape loading motor's forward output.

IC515(CXA1046M)

Pin No.	Symbol	Description
1	RF IN	RF input terminal.
2	F CTL	External resistor connection terminal for pilot filter (LPF) characteristics.
3	B VOL	B-CH gain adjustment resistor/bypass capacitor connection terminal of gain control amplifier.
4	A VOL	A-CH gain adjustment resistor/bypass capacitor connection terminal of gain control amplifier.
5	PILOT OUT	Pilot signal output terminal.
6	ENV DET IN	Envelope detection input terminal.
7	ENV HOLP	Envelope detection hold capacitor connection terminal.
8	S/H 3 OUT	Sample and hold 3 output terminal.
9	SWP	Process signal's A-CH/B-CH select control terminal (H: B-CH, L: A-CH).
10	ATF ON/OFF	ATF block (other than RF DET) ON/OFF select terminal.
11	NORM PLAY	Determines whether the normal mode is entered (L: Normal mode).
12	ATS1	Sample and hold 1 sample pulse input terminal.
13	TE	Tracking error output terminal.
14	VCC	Power supply.
15	HOLD3C	Sample and hold 3 hold capacitor connection terminal.
16	HOLD2C	Sample and hold 2 hold capacitor connetion terminal.
17	ATS2	Sample and hold 2 sample input terminal.
18	ATS3	Sample and hold 3 sample pulse input terminal.
19	SYNC OUT	ATF sync signal output terminal.
20	GND	GND.
21	LIM PC	Limiter block's bypass capacitor connection terminal (can be replaced with pin 22). Negative input.
22	LIM IN	Limiter input terminal (can be replaced with pin 21). Positive input.
23	EQ OUT	ATF sync equalizer output terminal.
24	PCTL	Resistor connection terminal for sync equalizer's phase characteristics.
25	LCTL	Resistor connection terminal for sync equalizer low-range characteristics.
26	DET C1	Smoothing capacitor connection terminal which determines the RF detector's threshold.
27	DET C2	RF envelope waveform's adjustment capacitor connection terminal.
28	RF DET OUT	RF detector output terminal.

IC529(CXD1009Q)

Pin No.	Symbol	Description
1	PTRD	Input from CXD1008Q. (Identifies whether the ECC data is a pointer or data.)
2	PRGE	ECC program end signal (from CXD1008Q).
3	ECA0	ECC code address (from CXD1008Q).
4	ECA1	ECC code address (from CXD1008Q).
5	ECA2	ECC code address (from CXD1008Q).
6	ECA3	ECC code address (from CXD1008Q).
7	ECA4	ECC code address (from CXD1008Q).
8	C1C2	To CX1008Q (C1 and C2 process identification).
9	PRGS	To CXD1008Q (ECC program start signal).
10	ECRP	To CXD1008Q (ECC encode/decode identification).
11	PREN	To CXD1008Q (ECC external RAM I/O process enable).
12	Vss	GND.
13	CLKO	To CXD1008Q (18.816MHz output).
14	CSET	To CXD1008Q (CXD1008/CXD1009 sync signal).
15	FLCT	To CXD1008Q (control signal).
16	DARE	To CXD1008Q (DA data read enable).
17	SRVS	From CXD1008Q (12.8kHz servo reference signal).
18	C94M	9.408MHz output.
19	PLCK	9.408MHz RF PL playback lock ±⊿.
20	CRCM	W1+W2+parity CRC monitor in PB mode.
21	SWP	Switching pulse input.
22	DPG	DPG pulse input.
23	SVRF	100/3Hz servo reference signal.
24	RSEL	External RAM selection (L: SRAM, H: DRAM).
25	SBSY	Subcode sync signal.
26	SBDT	Operation mode setting and subdata I/O micrtcomputer interface.
27	EXCK	SBDT I/O clock (from system control).
28	DTC1	SBDT control 1.
29	DTC2	SBDT control 2.
30	LRCK	LR lock (L: L-CH, R: R-CH).
31	WCK	Word clock.
32	EXSY	System sync signal. Master mode: Output, Slave mode: Input.
33	V_{DP}	5V.
34	ATD2	ATF signal. Pilot signal window pulse in REC mode.
35	ATD1	Overall track's tracking information.
36	ATSY	PB ATF signal from CXD1046M.
37	ATS3	On track pilot sampling pulse.
38	ATS2	Adjacent track pilot sampling pulse.
39	ATS1	Adjacent track pilot sampling pulse.
40	RFSF	RF PB signal's envelope detection signal.
41	PHCO	RF PLL's phase comparison signal.
42	TEST	Test terminal. Usually set to low.
43	VCOI	VCO oscillation terminal (input).
44	VCOO	VCO oscillation terminal (output).
45	CKOE	Usually set to low.
46	PBDT	RF PB signal input.
47	XCLR	System clear input. System is cleared when low (during power on reset).

Pin No.	Symbol	Description
48	REDT	RF REC signal output.
49	REPB	REC window pulse.
50	XT1O	18.816MHz crystal oscillator terminal (output).
51	XT1I	18.816MHz crystal oscillator terminal (input).
52	VSS	GND.
53	XEAN	External RAM's external addressing enable.
54	XWE	External RAM WE.
55	XOE	External RAM OE.
56	AD00	External RAM address(LSB).
57	AD01	External RAM address.
58	AD02	External RAM address.
59	AD03	External RAM address.
60	AD04	External RAM address.
61	AD05	External RAM address.
62	AD06	External RAM address.
63	AD07	External RAM address.
64	AD08	External RAM address.
65	AD09	External RAM address.
66	AD10	External RAM address.
67	AD11	External RAM address.
68	AD12	External RAM address.
69	AD13	External RAM address (MSB).
70	D0	External RAM data bus (LSB).
71	D1	External RAM data bus.
72	D2	External RAM data bus.
73	V_{DD}	Power supply (+5V).
74	D3	External RAM data bus.
75	D4	External RAM data bus.
76	D5	External RAM data bus.
77	D6	External RAM data bus.
78	D7	External RAM data bus (MSB).
79	DE	Controls whether the CXD1008Q's data bus is set to the output mode.
80	RW	Identifies whether CXD1008Q reads or writes data.

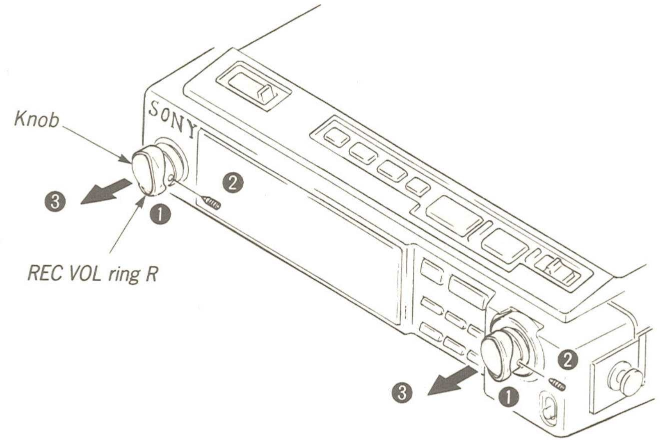
IC530 (CXD1008Q)

Pin No.	Symbol	Description
1	XRST	Reset terminal. Reset when low.
2	TST1	Test terminal. Usually, set to low.
3	PHCO	Phase comparison signal output to generate variable pitch's 256FS (tristate).
4	TST2	Test terminal. Usually set to low.
5	DALF	Selects whether the DADT serial data is set to LSB first or MSB first. Set to LSB first when high.
6	VCOI	VCO input (variable pitch's 256FS). FS's variable range is within reference FS±12%.
7	ADLF	Selects whether the ADDT serial data is set to LSB first or MSB first. Set to LSB first when high.
8	XT2I	Crystal oscillator circuit 2's input (44.1kHz×512=22.5792MHz).
9	XT2O	Crystal oscillator circuit 2's output.
10	V_{SS}	GND (0V).
11	XT3I	Crystal oscillation circuit 3's input (48kHz+512=24.576MHz).
12	XT3O	Crystal oscillator circuit 3's output.
13	AUDR	Selects whether the playback data is audio 16-bit data. The audio 16-bit mode is entered when high. No interpolation (1) is done when low. The PCM 16 bits are divided into high-order 8 bits and low-order 8 bits. Their error flags are then output.
14	MNTG	Indicates that error correction status's monitor data is being output to D7 through D0 when high.
15	LRO1	15BCK-delayed LRCK signal.
16	LRO2	16BCK-delayed LRCK signal.
17	LRO3	Inverted LRO2's H and L signals.
18	DFCK	256FS output terminal. Output when FSEN is high; high impedance when FSEN is low.
19	DIOC	128FS input/output terminal. Output when FSEN is high; input when FSEN is low.
20	DADT	DA serial data output data (playback data in PB mode and REC monitor data in REC mode). L-CH data is input or output from ADDT and DADT when LRCK is low. When it is high, R-CH data is input or output.
21	ERRF	DA serial data output error flag. Indicates that there is an error when high.
22	ADDT	AD serial data input (record data input). When LRCK is low, L-CH data is input or output from ADDT and DADAT. When it is high, R-CH data is input or output.
23	XBCK	Inverted "H"/"L" BCK signal.
24	BCK	$64F_S$ input/output terminal. Output when FSEN is high; input when FSEN is low.
25	WCK	$2F_S$ input/output terminal. Output when FSEN is high; input when FSEN is low.
26	V_{DD}	Power supply+5V.
27	LRCK	F_S input/output terminal. Output when FSEN is high; input when FSEN is low.
28	FSEN	Selects whether DFCK, DIOC, BCK, WCK, and LRCK signals should be output. Output when it is high.
29	MUTG	PB/REC data muting control signal. Mute on when it is high; mute off when it is low.
30	PIDN	Variable pitch control signal. Pitch is descreased 0.1% at every leading edge (F_S is decreased 0.1% as compared with reference).
31	PIUP	Variable pitch control signal. Pitch is increased 0.1% at every leading edge (F_S is increased 0.1% as compared with reference).
32	CTL2	Status data input control signal. Status data is shifted and input when CTL2 and CTL1 are high.
33	CTL1	Status data input control signal. Status data is shifted and input when CTL2 and CTL1 are high.
34	EXCK	Status data shift input clock. Status data is shifted and input at leading edge.
35	STAT	Status data serial input terminal.
36	SBSY	Status data load signal. Shifted status data is loaded into status register at the trailing edge.
37	SRVS	12.8kHz servo reference signal. (Can be changed at 12.8kHz ±12% in variable pitch mode.)
38	ADAE	AD/DA data is input or output from D0 through D7 when is high.
39	FLGC	Forcible error flag, erasure correction inhibit, and muting control signals are input during time sharing.
40	CKRS	Master clock reset signal. Reset when is high.
41	CLKI	Master clock (18.816MHz).
42	V_{SS}	GND.
43	PREN	ECC data input/output request inhibit signal. Request is inhibited when is low.
44	RCPB	Controls whether ECC is encoded (in REC mode) or decoded (in PB mode). Encoded when is high.
45	PRGS	ECC process start signal. Started at the leading edge.
46	C1C2	Controls whether ECC process is related to C1 code or C2 code. C1 code is processed when is high.
47	A4	ECC data location A4 (MSB).
48	A3	ECC data location A3.
49	A2	ECC data location A2.
50	A1	ECC data location A1.
51	A0	ECC data location A0 (LSB).
52	PRGE	Inverted from high to low and vice versa whenever ECC data is processed every code.
53	PTRD	Indicates whether ECC data input and output is requested by error pointer or code data. Requested by error pointer when is high.
54	RW	Indicates whether ECC data input and output is requested by input (read from RAM) or output (write to RAM). Requested by input when is high.
55	XDOE	Controls whether signals at D0 through D7 should be output. Output when is low.
56	D_7	External data bus terminal (MSB).
57	D_6	External data bus terminal (2SB).
58	V_{DD}	Power supply (+5V).
59	D5	External data bus terminal (3SB).
60	D4	External data bus terminal (4SB).
61	D3	External data bus terminal (5SB).
62	D2	External data bus terminal (6SB).
63	D1	External data bus terminal (7SB).
64	D0	External data bus terminal (LSB).

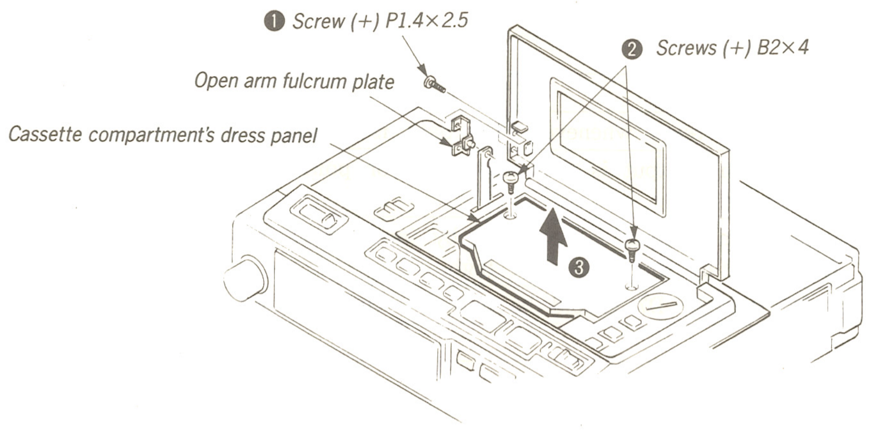
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

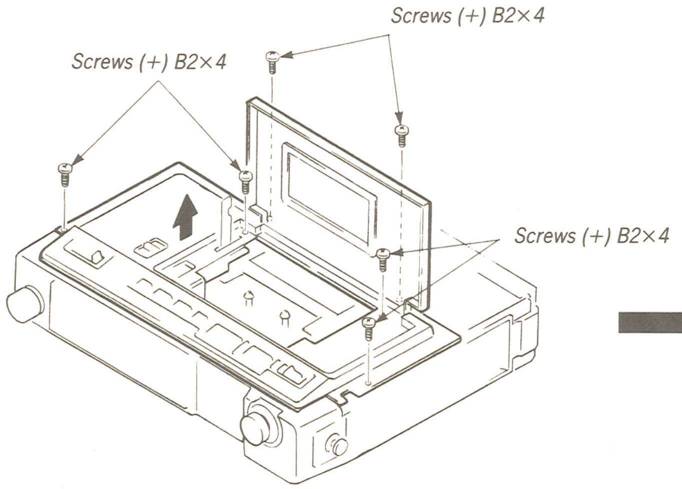
2-1. KNOB


Knob
❸
❶
❷
REC VOL ring R
❸
❶
❷

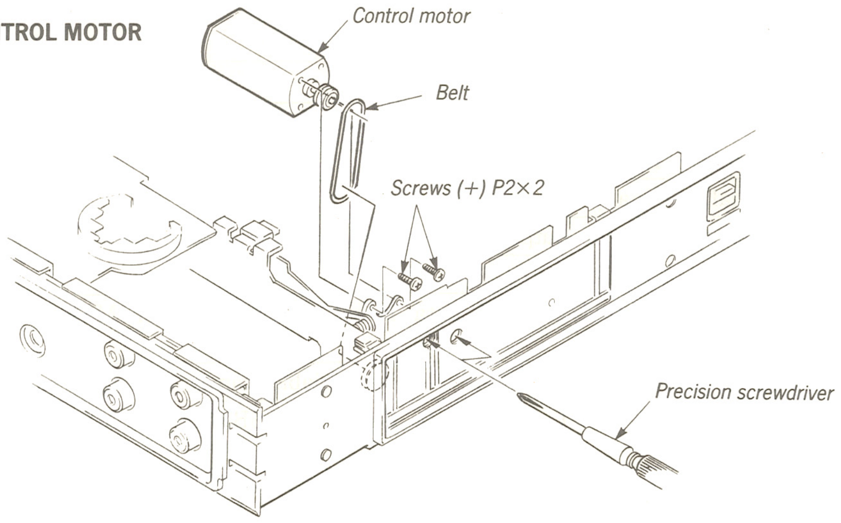
2-2. CASSETTE COMPARTMENT'S DRESS PANEL


❶ Screw (+) P1.4×2.5
❷ Screws (+) B2×4
Open arm fulcrum plate
Cassette compartment's dress panel
❸

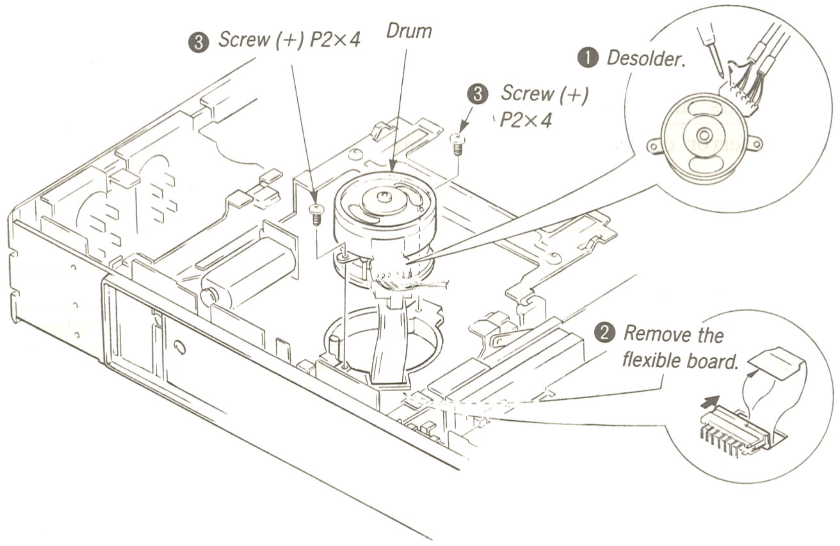
2-3. CABINET (UPPER)


Screws (+) B2×4
Screws (+) B2×4
Screws (+) B2×4

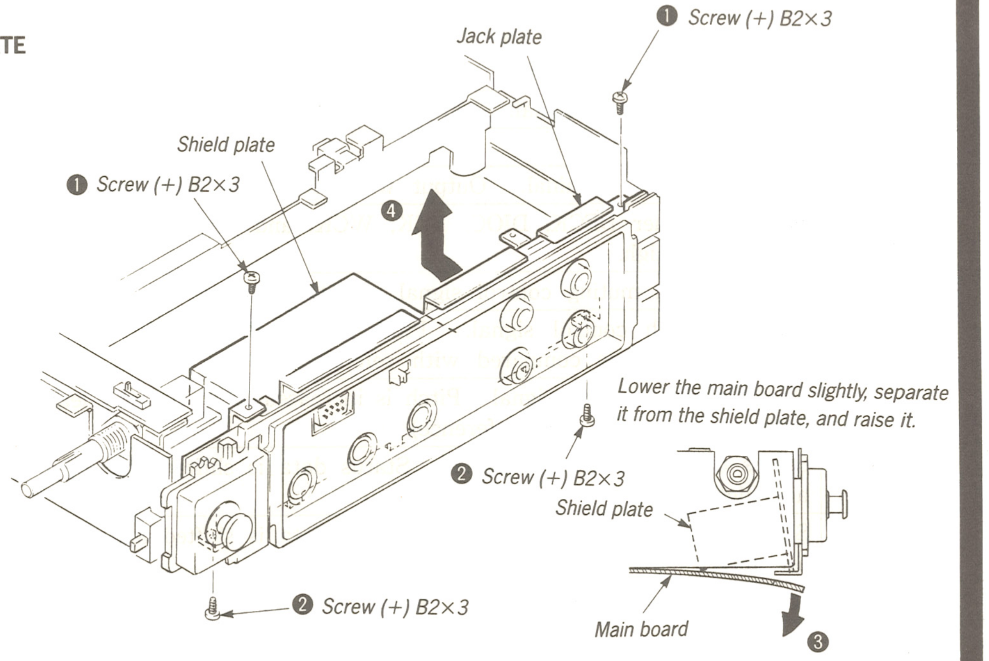
2-4. CONTROL MOTOR


Control motor
Belt
Screws (+) P2×2
Precision screwdriver

2-5. DRUM

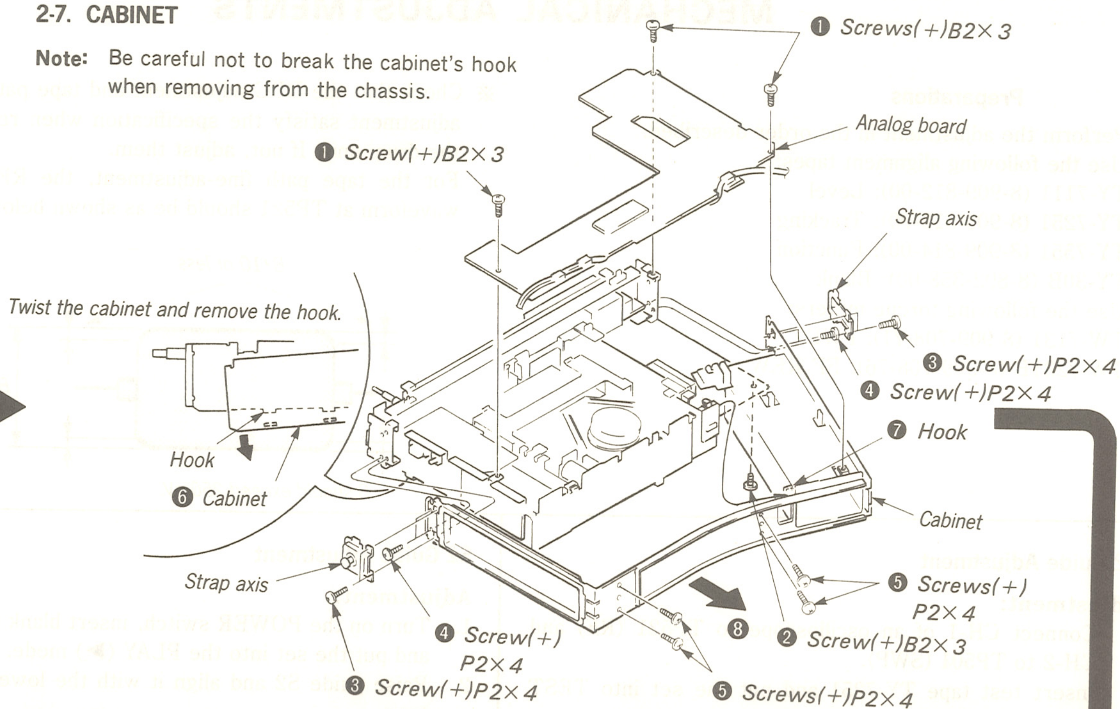

❸ Screw (+) P2×4
Drum
❶ Desolder.
❸ Screw (+) P2×4
❷ Remove the flexible board.

2-6. JACK PLATE


Jack plate
❶ Screw (+) B2×3
Shield plate
❶ Screw (+) B2×3
❹
Lower the main board slightly, separate it from the shield plate, and raise it.
❷ Screw (+) B2×3
Shield plate
❷ Screw (+) B2×3
Main board
❸

2-7. CABINET

Note: Be careful not to break the cabinet's hook when removing from the chassis.

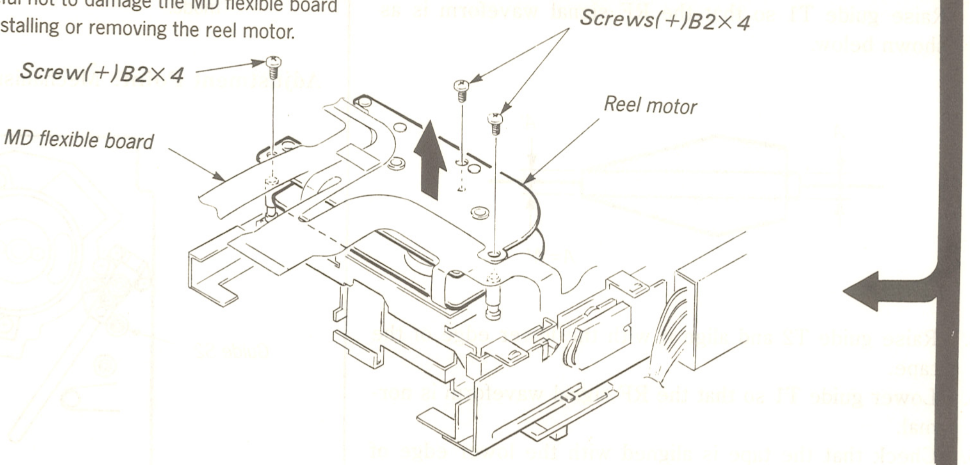


Twist the cabinet and remove the hook.

❶ Screws(+)B2×3
Analog board
❶ Screw(+)B2×3
Strap axis
❸ Screw(+)P2×4
❹ Screw(+)P2×4
❼ Hook
Hook
❻ Cabinet
Cabinet
Strap axis
❺ Screws(+) P2×4
❹ Screw(+) P2×4
❽
❷ Screw(+)B2×3
❸ Screw(+)P2×4
❺ Screws(+)P2×4

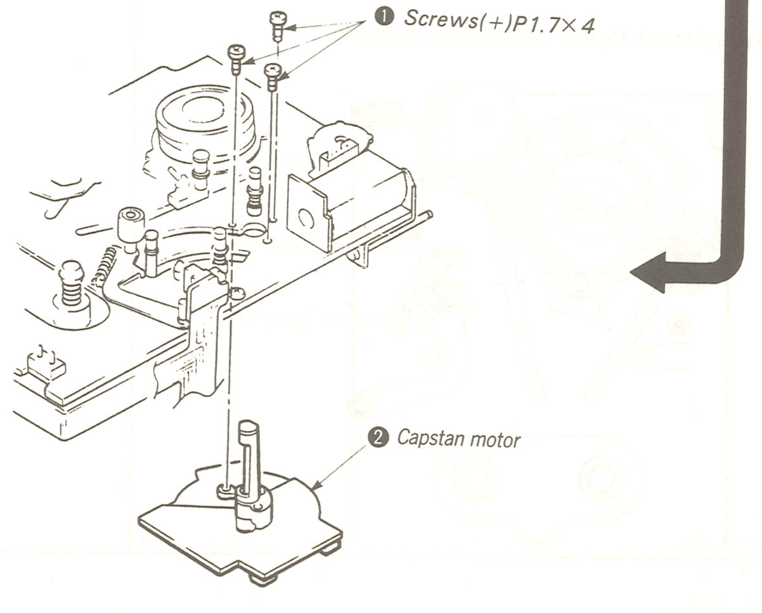
2-8. REEL MOTOR

Note: Be careful not to damage the MD flexible board when installing or removing the reel motor.



Screws(+)B2×4
Screw(+)B2×4
Reel motor
MD flexible board

2-9. CAPSTAN MOTOR



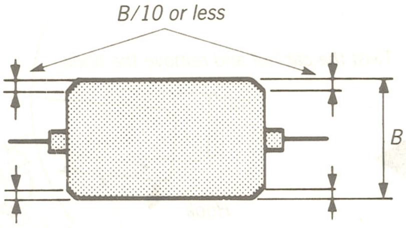
❶ Screws(+)P1.7×4
❷ Capstan motor

SECTION 3
MECHANICAL ADJUSTMENTS

Preparations

1. Perform the adjustment in the order described.
2. Use the following alignment tapes:
   TY-7111 (8-909-812-00): Level
   TY-7251 (8-909-813-00): Tracking
   TY-7551 (8-909-814-00): Function
   TY-30B (8-892-358-00): Blank
   Use the following torque meters:
   TW-7131 (8-909-708-71): FWD
   TW-7231B (8-909-708-76): FF/REW

※ Check that the DPG adjustment and tape path fine-adjustment satisfy the specification when replacing the drum unit. If not, adjust them.
For the tape path fine-adjustment, the RF signal waveform at TP521 should be as shown below.

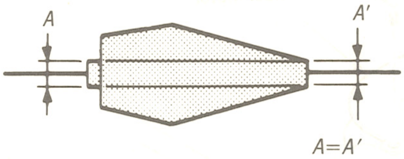


B should exceed 250mV.

T2 Guide Adjustment

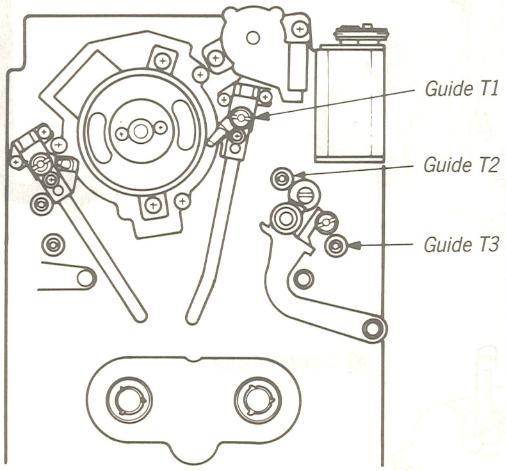
Adjustment:

1. Connect CH-1 of an oscilloscope to TP521 (RF) and CH-2 to TP501 (SWP).
2. Insert test tape TY-7251 and put the set into TEST mode 1.
   Press the FF button (to enter the ×1.5 mode).
3. Raise guide T1 so that the RF signal waveform is as shown below.



4. Raise guide T2 and align it with the lower edge of the tape.
5. Lower guide T1 so that the RF signal waveform is normal.
6. Check that the tape is aligned with the lower edge of guide T3.

Adjustment Point: Mechanism assembly

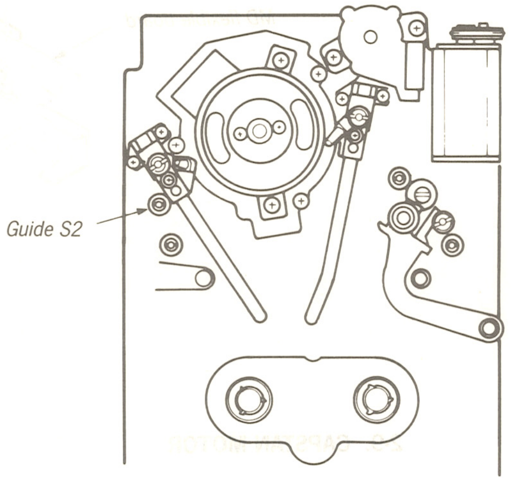


S2 Guide Adjustment

Adjustment:

1. Turn on the POWER switch, insert blank tape TY-30B, and put the set into the PLAY (▶) mode.
2. Raise guide S2 and align it with the lower edge of the tape.
   Note: Check that no curl occurs at guide S2 in the REW (◀◀) mode.

Adjustment Point: Mechanism assembly

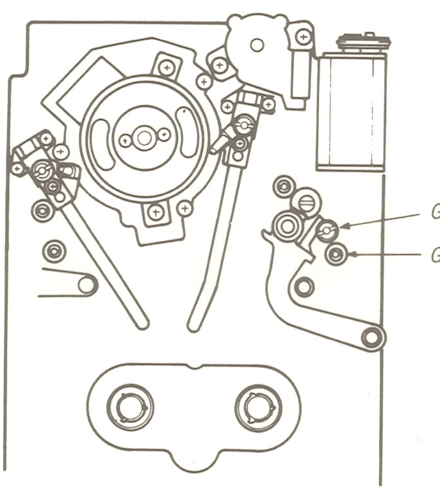


F Guide Adjustment

Adjustment:

1. Turn on the POWER switch, insert blank tape TY-30B, and put the set into the PLAY (▶) mode.
2. Align guide F with the lower edge of the tape.
   Note: Check that the tape is aligned with the lower edge of guide T3 and is not curled.

Adjustment: Mechanism assembly

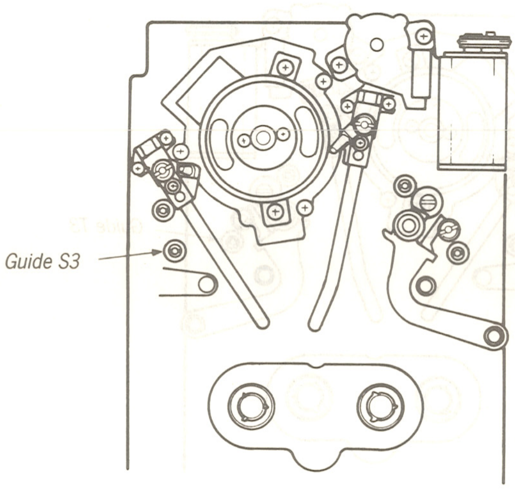


S3 Guide Adjustment

Adjustment:

1. Turn on the POWER switch, insert blank tape TY-30B, and put the set into the PLAY (▶) mode.
2. Align guide S3 with the lower edge of the tape.
   Note: Check that the tape is aligned with the lower edge of guide S3 and is not curled.

Adjustment: Mechanism assembly



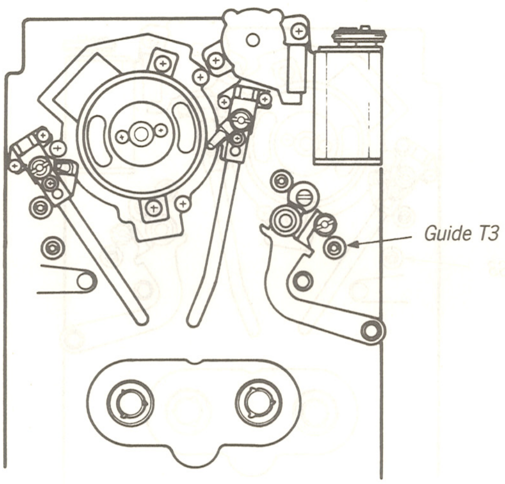
T3 Guide Adjustment

Adjustment:

1. Turn on the POWER switch, insert blank tape TY-30B, and put the set into the PLAY (▶) mode.
2. Align guide T3 with the lower edge of the tape.

   Note: Check that the tape is aligned with the lower edge of guide T3 and is not curled.

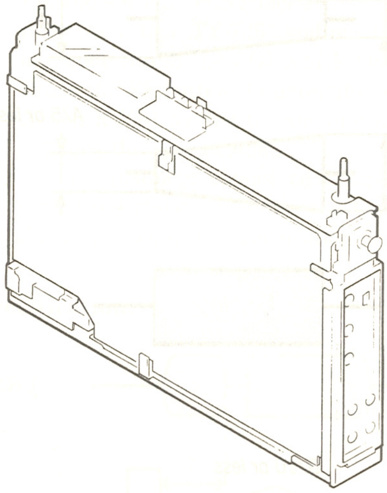
Adjustment Point: Mechanism assembly



SECTION 4
ELECTRICAL ADJUSTMENTS

FWD Back Tension Adjustment

The FWD back tension varies depending on the set's position. Be sure to adjust the set positioned as shown below.

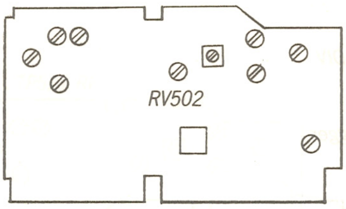


Adjustment:

1. Put the set into TEST mode 2.
2. Insert FWD torque meter TW-7131 and put the set into the loading mode (press thge COUNTER button).
3. Put the set into the PLAY mode and adjust RV502 so that the back tension (at supply side) satisfies the specification.

Specification: 4 to 5 g·cm

Adjustment Point: Main board



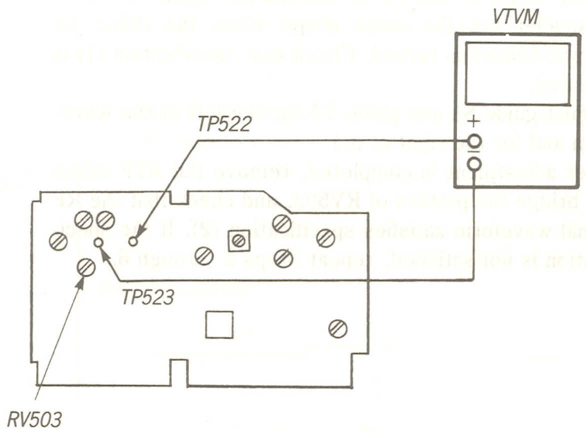
ATF Tracking Voltage Adjustment

Adjustment:

1. Put the set into TEST mode 2.
2. Insert test tape TY-30B (blank tape) and put the set into the loading mode (press the COUNTER button).
3. Put the set into the STOP mode and adjust RV503 so that the potential difference at TP522 and TP523 satisfies the specification.

Specification: −20 to 20mV

Adjustment Point: Main board



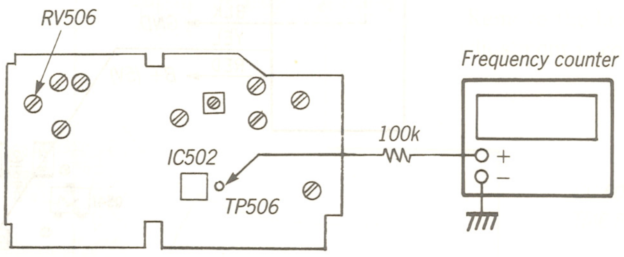
Capstan Speed Adjustment

Adjustment:

1. Put the set into TEST mode 2.
2. Insert test tape TY-30B (blank tape) and put the set into the loading mode (press the COUNTER button).
3. Put the set into the PLAY mode and adjust RV506 so that the frequency at TP506 satisfies the specification.

Specification: 674±1Hz

Adjustment Point: Main board

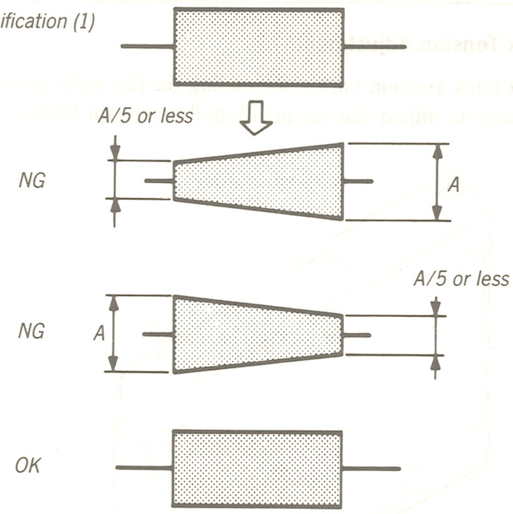


Tape Path Fine-Adjustment

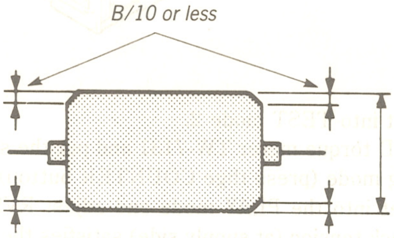
Adjustment:

1. Put the set into TEST mode 1 (turn off the POWER switch).
2. Open the pattern of RV503 (in portion Ⓐ of the figure) and connect the ATF offset jig as shown in the figure.
3. Turn on the POWER switch, insert test tape TY-7251, and put the set into the loading mode (press the COUNTER button).
4. Press the FF button (to enter the ×1.5 mode).
5. Turn the ATF offset jig volume control so that the RF signal waveform is maximized and stabilized.
   Adjust guides S1 and T1 so that the RF signal waveform is almost square.
6. Finely adjust S1 and T1 so that the RF signal waveform is smaller but the same shape when the offset jig volume control is turned. Check that specification (1) is satisfied.
   (Adjust guide S1 and guide T1 for the left of the waveform and for the right of it.)
7. After adjustment is completed, remove the ATF offset jig, bridge the pattern of RV503, and check that the RF signal waveform satisfies specification (2). If the specification is not satisfied, repeat Steps 2 through 6.

Specification (1)

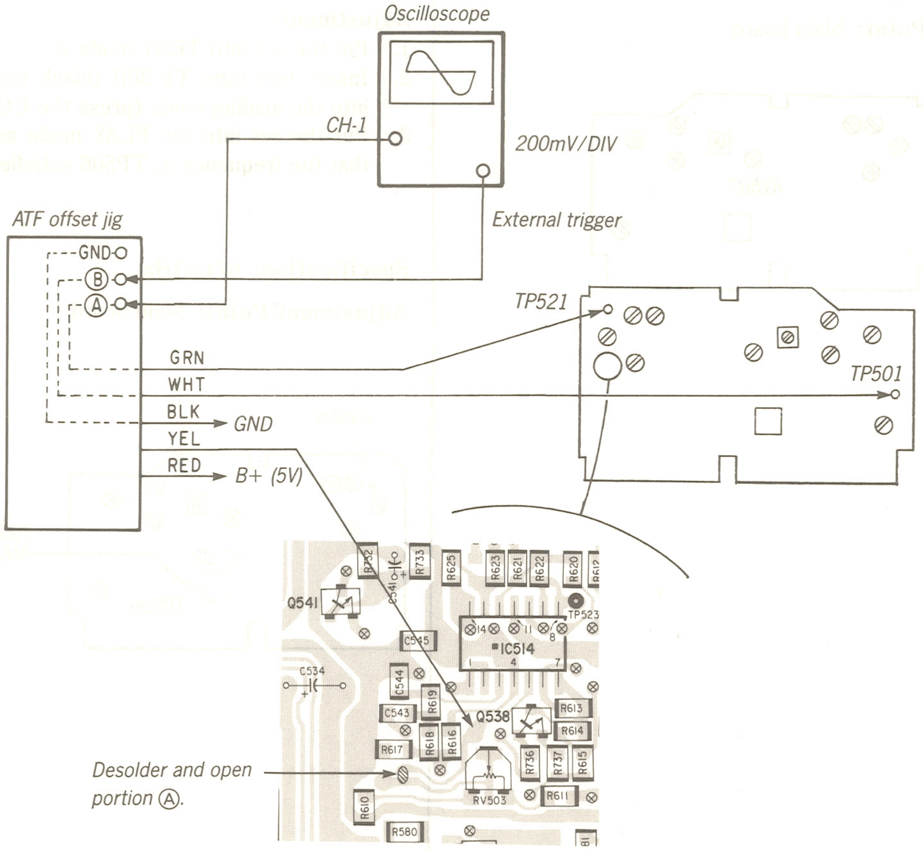

A/5 or less
NG
A
A/5 or less
NG
A
OK

Specification (2)


B/10 or less
B

B should exceed 250mV.

Adjustment Point: Main board


Oscilloscope
CH-1
200mV/DIV
External trigger
ATF offset jig
GND
Ⓑ
Ⓐ
GRN
WHT
BLK
YEL
RED
GND
B+ (5V)
TP521
TP501
Q541
C541
R732
R733
R625
R623
R621
R622
R620
R612
TP523
IC514
C545
C534
C544
C543
R619
Q538
R613
R614
R617
R618
R616
R736
R737
R615
RV503
R611
R610
R580
Desolder and open portion Ⓐ.

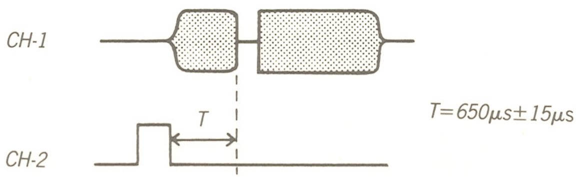
DPG Adjustment

Be sure to make this adjustment when replacing the drum unit.

Adjustment:

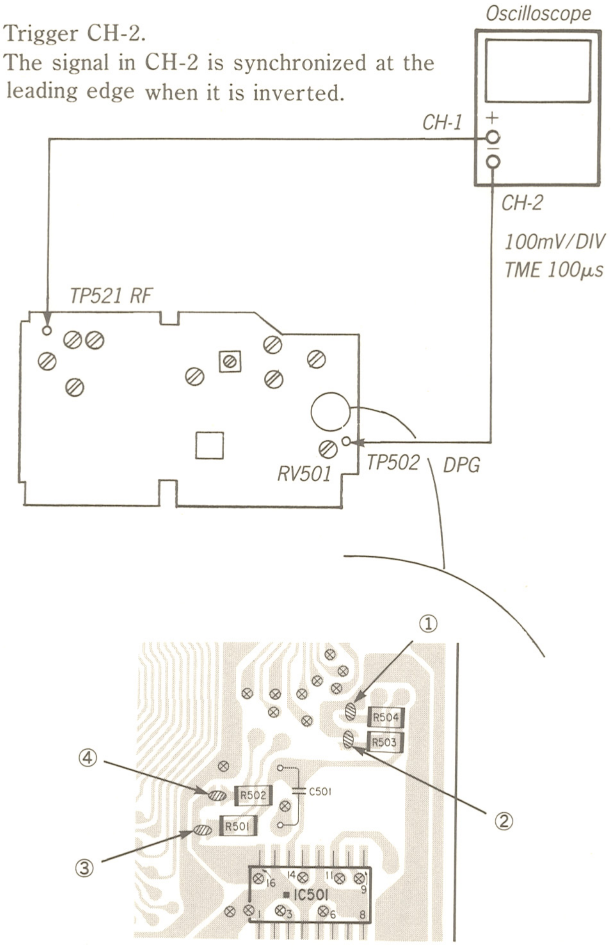
1. Put the set into TEST mode 1.
2. Insert test tape TY-7251 and put the set into the loading mode (press the COUNTER button).
3. Press the FF button (to enter the ×1.5 mode).
4. Adjust RV501 so that the waveform on the oscilloscope satisfies the specification.
5. When adjustment cannot be completely made using a semi-fixed resistor, remove the taps in the order of ① through ④ until the specification is satisfied.

Specification:


CH-1
T
CH-2
T=650µs±15µs

Adjustment Point: Main board

Trigger CH-2.
The signal in CH-2 is synchronized at the leading edge when it is inverted.

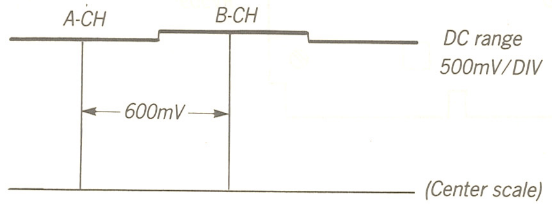

Oscilloscope
CH-1
+
CH-2
100mV/DIV
TME 100µs
TP521 RF
RV501
TP502
DPG
①
②
③
④
R504
R503
R502
R501
C501
IC501

ATF Pilot Adjustment

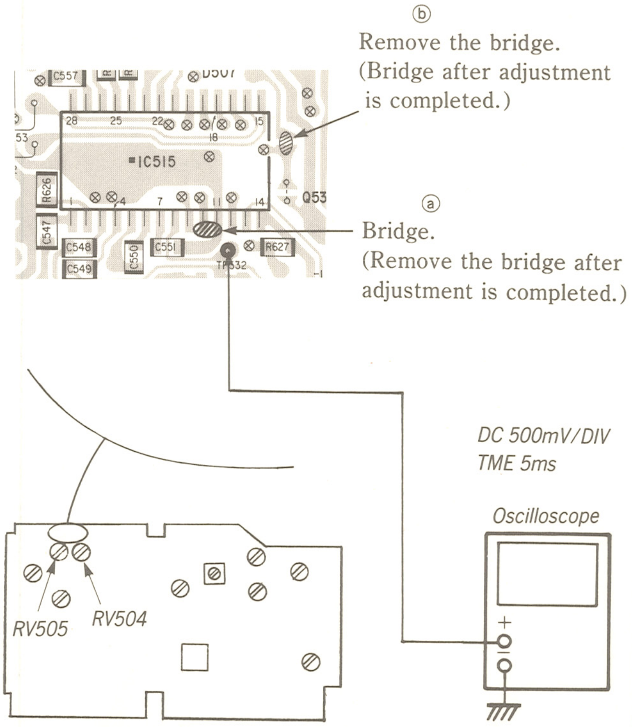
Adjustment:

1. Put the set into TEST mode 2.
2. Insert test tape TY-7111 and put the set into the loading mode (press the COUNTER button).
3. Put the set into the STOP mode and adjust so that the luminescent spot on an oscilloscope at TP532 is located on the scale center.
   (Never align the spot with the center when the input is to GND.)
4. Turn all POWER OFF and bridge pins ⑩ and ⑪ of IC515 (portion ⓐ) or remove the bridge in portion ⓑ.
5. Turn on the POWER and put the set into TEST mode 2. Change the mode from TEST 2 to PLAY and adjust RV504 (A-CH) and RV505 (B-CH) so that the waveform on the oscilloscope satisfies the specification.
   (The waveform deflects vertically from the 600mV reference.)
6. After adjustment is completed by restor bridge of IC515.

Specification:


A-CH
B-CH
DC range
500mV/DIV
600mV
(Center scale)

Adjustment Point: Main board


ⓑ
Remove the bridge.
(Bridge after adjustment is completed.)
ⓐ
Bridge.
(Remove the bridge after adjustment is completed.)
C557
D507
IC515
Q53
R626
C547
C548
C549
C550
C551
TP532
R627
DC 500mV/DIV
TME 5ms
Oscilloscope
RV505
RV504

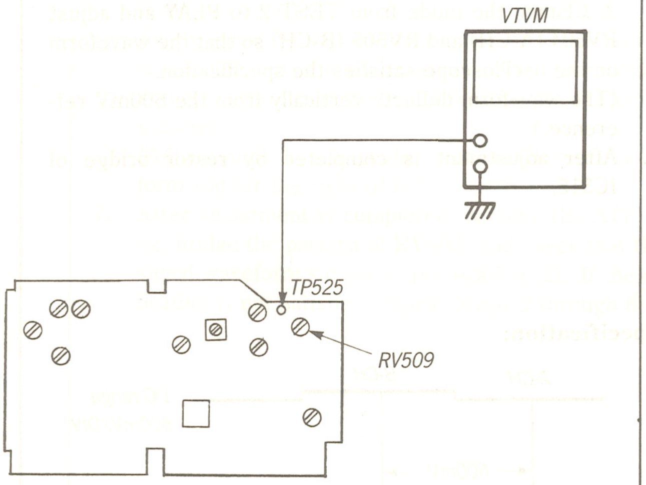
VCO Free-Run Voltage Adjustment

Adjustment:

1. Put the set into TEST mode 2.
2. Insert test tape TY-30B (blank tape) and put the set into the loading mode (press the COUNTER button). ton).
3. Adjust RV509 so that the voltage at TP525 satisfies the specification in the STOP mode.

Specification: −3.1 to −3.3 V

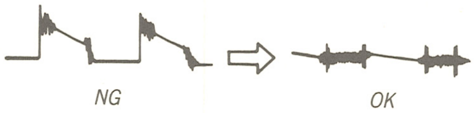
Adjustment Point: Main board



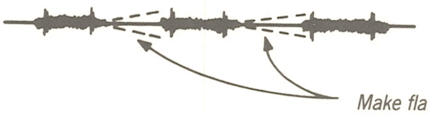
VCO Adjustment

Adjustment:

1. Put the set into TEST mode 2.
2. Insert a music tape and put the set into the loading mode (press the COUNTER button).
3. Open the RV710's tap (portion Ⓐ in the figure) and put the set into the PLAY mode.
4. Adjust RV507 so that the waveform at TP526 is as shown below.

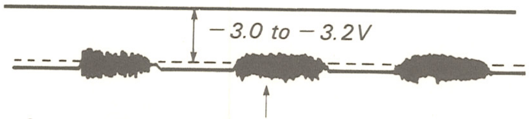


5. Adjust RV508 so that the waveform at TP526 is as shown below.



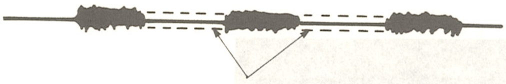
Make flat.

6. Put the set into CUE (×2.5) and REVIEW (−×2.5) modes and finely adjust RV507 so that the waveform at TP526 is the same as that in Step 4.
7. Put the set into the STOP mode and turn off all POWER.
8. Bridge the RV710's tap and turn on the POWER.
9. Put the set into the PLAY mode and adjust L502 so that the DC potential (containing an RF signal) at TP526 satisfies the specification.



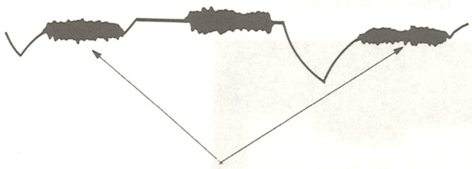
Center voltage of amplitude at portion containing RF signal

10. Put the set into the CUE (×2.5) mode and adjust RV509 so that the waveform at TP526 satisfies the specification.



Make flat.

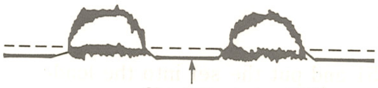
11. Put the set into the CUE (×16) and REVIEW (−×16) modes. Adjust RV507 so that the waveform at TP526 satisfies the specification.



Waveforms should not deflect vertically and should be stabilized.

To enter the CUE (×16) and REVIEW (−×16) modes, press the PLAY button while pressing the FF or REW button in the PLAY mode.

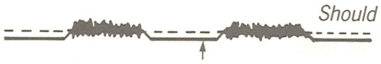
12. Put the set into the REVIEW (−×2.5) mode and check the waveform at TP526.



Waveforms deflects upwards, but should not remain on the plus (+) side.

Should be below 0.3V.

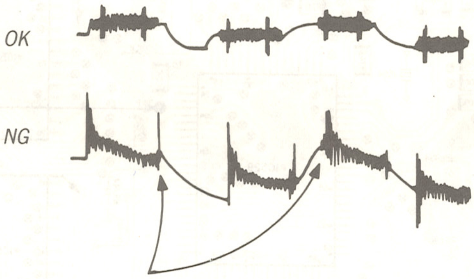
13. Put the set into the PLAY mode and check the waveform at TP526.



Should be stabilized at all times.

Should be below 0.1V.

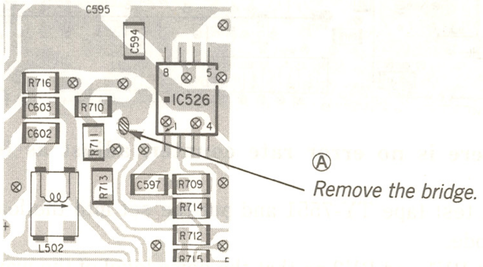
14. Put the set into FF-AMS mode and check the waveform at TP526.



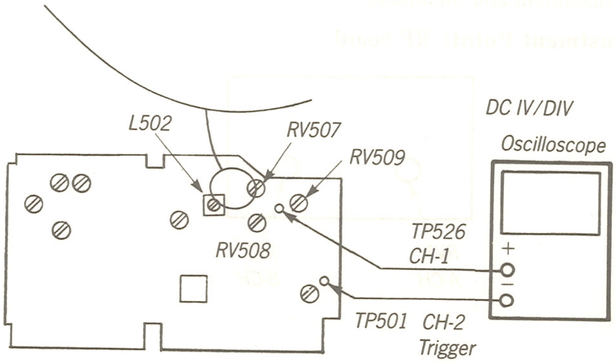
Voltage deflects to the plus (+) side.

15. Put the set into the STOP mode then the REW-AMS mode and check that the same waveform as in Step 14 is output.
16. If the waveforms in Steps 14 and 15 are NG, readjust RV507 and recheck Steps 11 through 15.

Adjustment Point: Main board



Ⓐ
Remove the bridge.



Playback Equalizer Adjustment

(Check that all adjustments prior to this adjustment are normal before making the Playback Equalizer Adjustment.)

Condition: Error rate counter setting

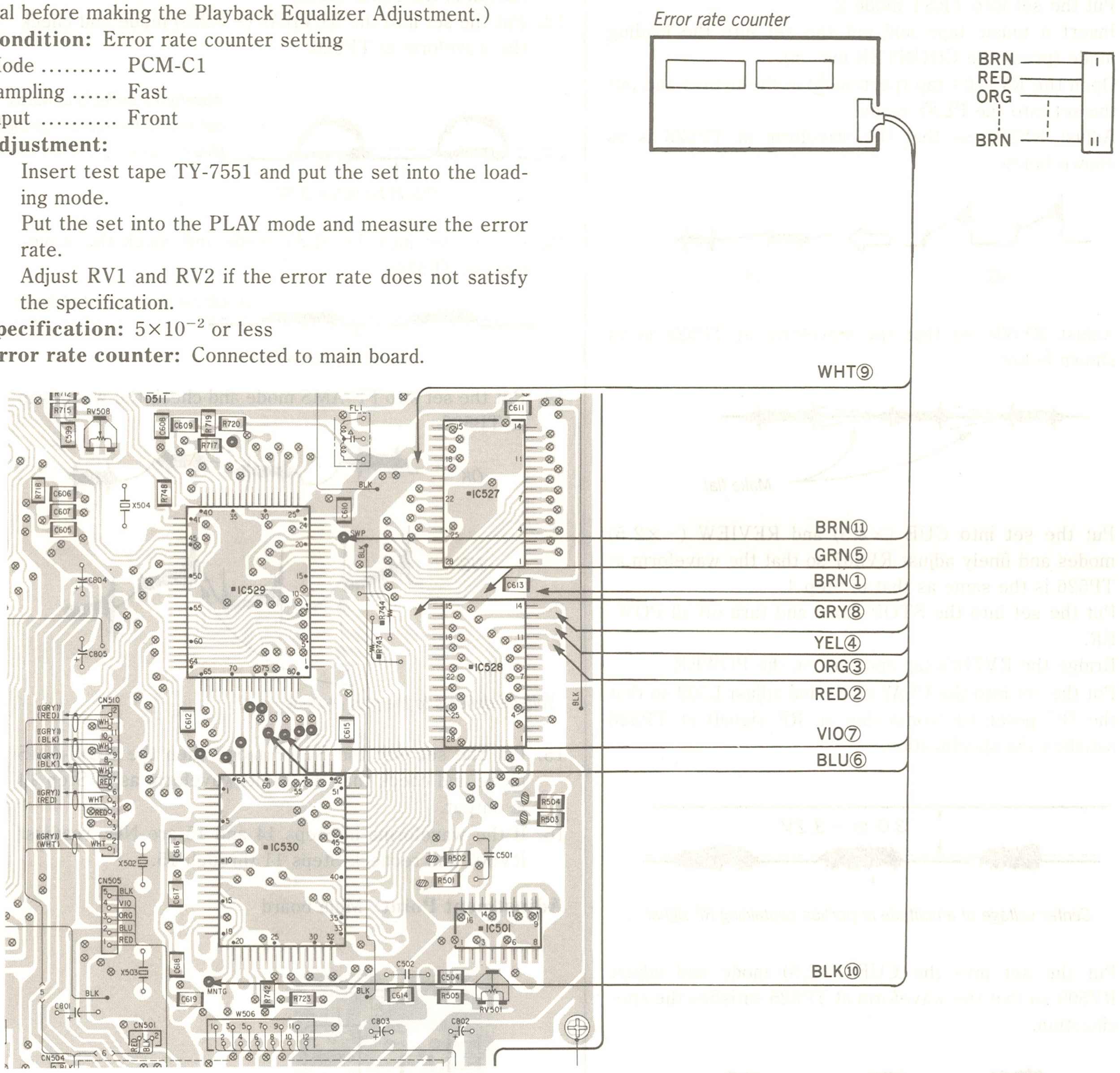
Mode PCM-C1
Sampling ...... Fast
Input .... Front

Adjustment:

1. Insert test tape TY-7551 and put the set into the loading mode.
2. Put the set into the PLAY mode and measure the error rate.
3. Adjust RV1 and RV2 if the error rate does not satisfy the specification.

Specification: 5×10^{-2} or less

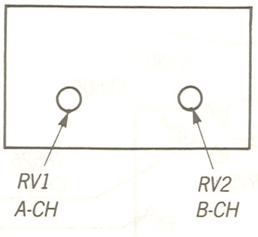
Error rate counter: Connected to main board.

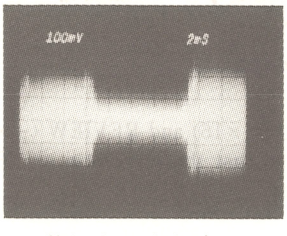

Error rate counter
BRN
RED
ORG
BRN
WHT⑨
BRN⑪
GRN⑤
BRN①
GRY⑧
YEL④
ORG③
RED②
VIO⑦
BLU⑥
BLK⑩
IC527
IC528
IC529
IC530
IC501
CN510
CN505
CN501
CN504
RV508
RV501
SWP
MNTG
BLK

When there is no error rate counter, adjust as follows:

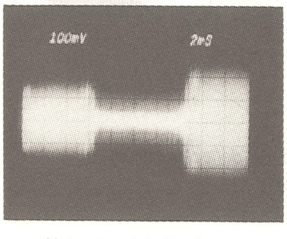
1. Insert test tape TY-7551 and put the set into the loading mode.
2. Adjust RV1 and RV2 so that the noise level of the waveform (containing no RF signal) at TP521 is between the maximum and minimum.

Adjustment Point: RF board


RV1
A-CH
RV2
B-CH



Noise is maximized.



Noise is minimized.

MIC Amplifier Offset Adjustment

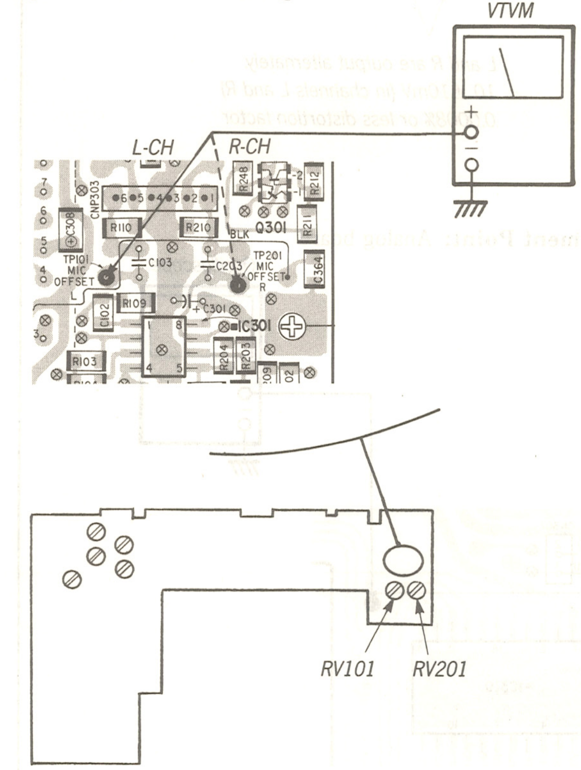
Condition: REC LEVEL .. MIN
VOLUME ...... MIN

Adjustment:

1. Insert test tape TY-30B (blank tape) and put the set into the loading mode.
2. Press the REC button, put the set into the REC monitor mode, and terminate the MIC input in 300 ohms.
3. Set the MIC ATT to 0dB and adjust RV101 and RV201 so that the voltage at TP101 (L-CH) and TP201 (R-CH) is 0V.

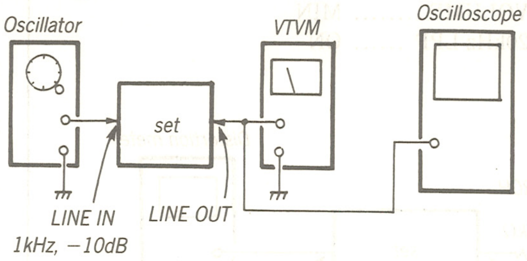
Specificaiton: −10 to 10mV

Adjustment Point: Analog board


VTVM
+
−
L-CH
R-CH
CNP303
R110
R210
R248
R212
Q301
R211
BLK
C308
TP101 MIC OFFSET L
C103
C203
TP201 MIC OFFSET R
C364
C102
R109
C301
IC301
R103
R204
R203
RV101
RV201

AD Level Adjustment

Setting:


Oscillator
VTVM
Oscilloscope
set
LINE IN
1kHz, −10dB
LINE OUT

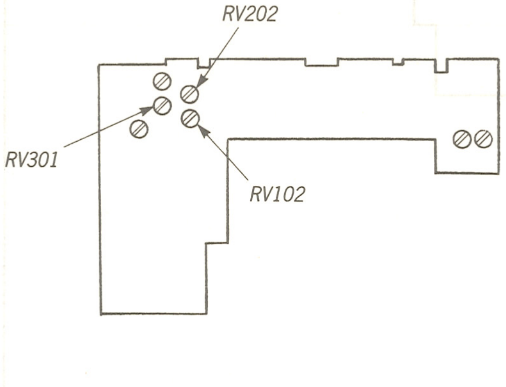
Condition: REC LEVEL .. MAX
VOLUME ...... MIN

Adjustment:

1. Insert test tape TY-30B (blank tape) and put the set into the loading mode.
2. Set the REC LEVEL control to MAX and supply a 1kHz signal (−10dB) to the LINE IN connector in channels L and R to enter the REC mode.
3. Adjust RV301 so that the L-CH LINE OUT level satisfies the specification.
4. Adjust RV102 so that no distortion occurs in the waveform.
5. Adjust RV202 so that no distortion occurs in the R-CH LINE OUT waveform. Check the waveform level.
6. When the R-CH level exceeds 7.3dB, readjust RV301 so that the L-CH level is 6.5dB. Next, adjust the waveform using RV102 and RV202.

Specification: 7.0 to 7.2dB

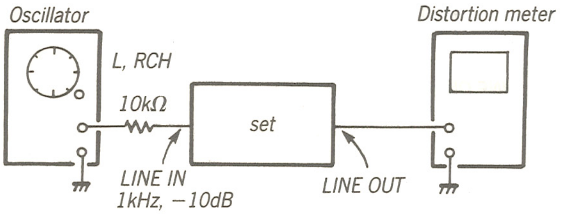
Adjustment Point: Analog board


RV202
RV301
RV102

AD Distortion Factor Adjustment

Condition: REC LEVEL .... MAX
VOLUME .... MIN
20kHz LPF ...... ON

Setting:

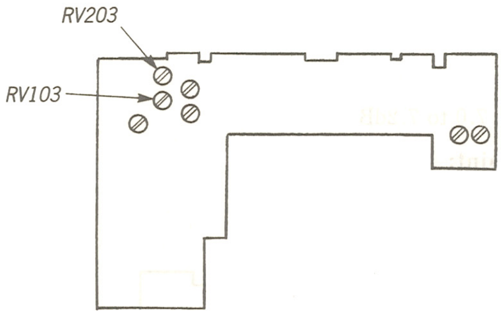

Oscillator
Distortion meter
L, RCH
10kΩ
set
LINE IN
1kHz, −10dB
LINE OUT

Adjustment:

1. Insert test tape TY-30B (blank tape) and put the set into the loading mode.
2. Set the REC LEVEL control to MAX and supply a 1kHz signal (−10dB) to the LINE IN connector in channels L and R to enter the REC mode.
3. Terminate the R-CH LINE IN connector in 10k ohms for L-CH, and the L-CH LINE IN connector in 10k ohms for R-CH.
4. Turn RV103 and RV203 counterclockwise so that the LINE OUT distortion factor is minimized.

Specification: 0.008% or less

Adjustment Point: Analog board

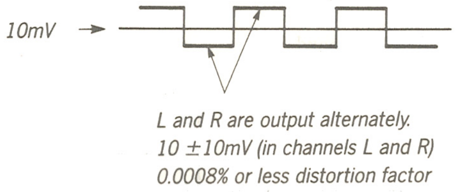

RV203
RV103

AD Offset Adjustment

Adjustment:

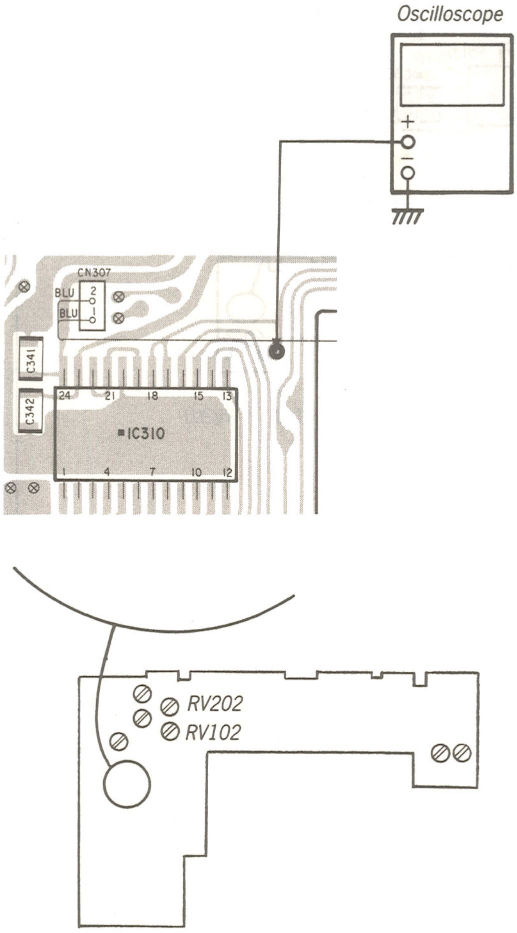
1. Insert test tape TY-30B (blank tape) and put the set into the loading mode.
2. Set the REC LEVEL control to MIN and put the set into the REC mode.
3. Terminate the LINE IN connector in both channels in 10k ohms.
4. Adjust RV102 and RV202 so that the output at pin ⑰ of IC310 satisfies the specification.
5. Measure the distortion factor in the same manner as in the AD Distortion Factor Adjustment.
6. Repeat the AD Distortion Factor Adjustment if the specification is not satisfied.

Specification:



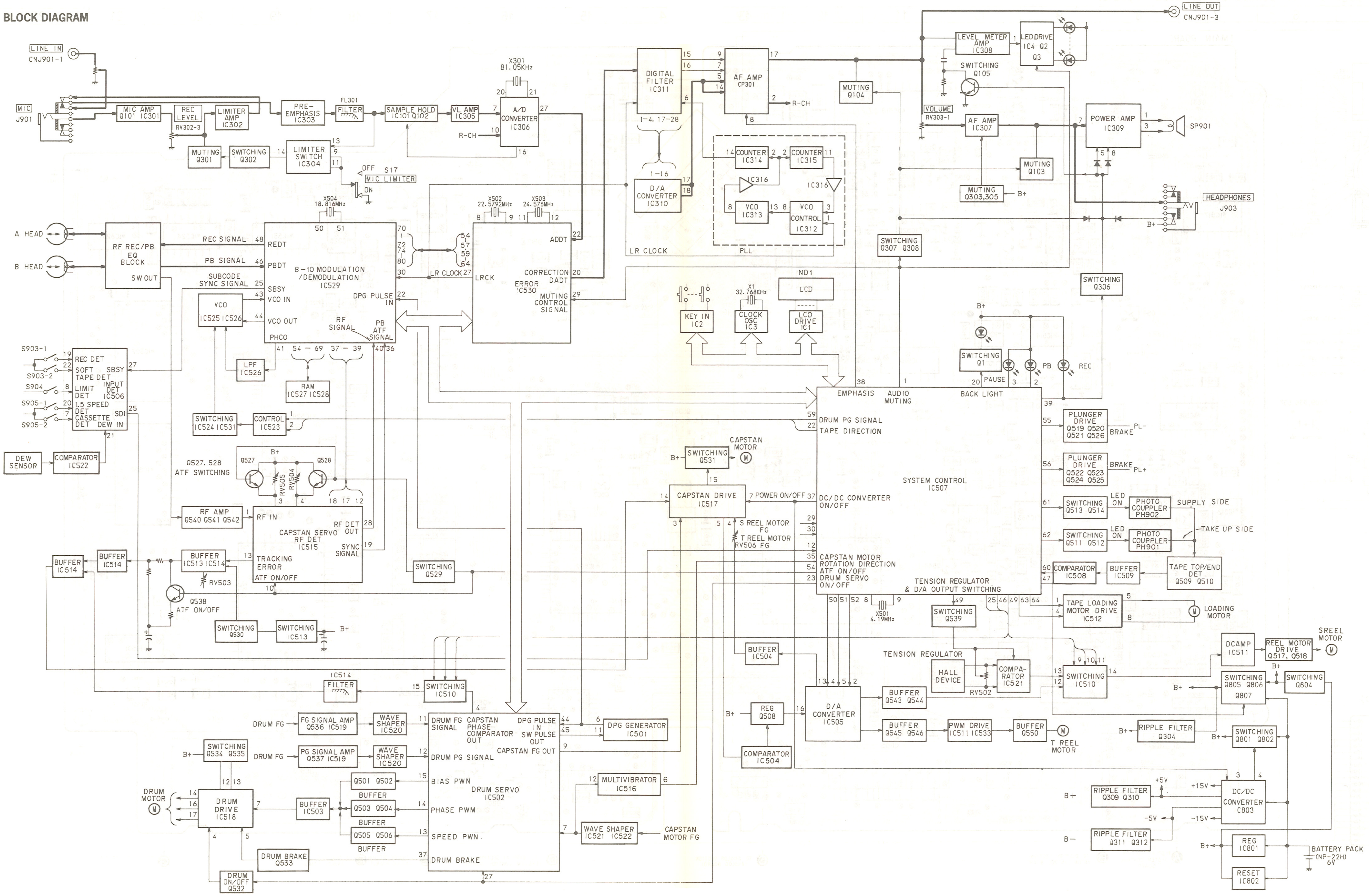
L and R are output alternately.
10 ±10mV (in channels L and R)
0.0008% or less distortion factor

Adjustment Point: Analog board

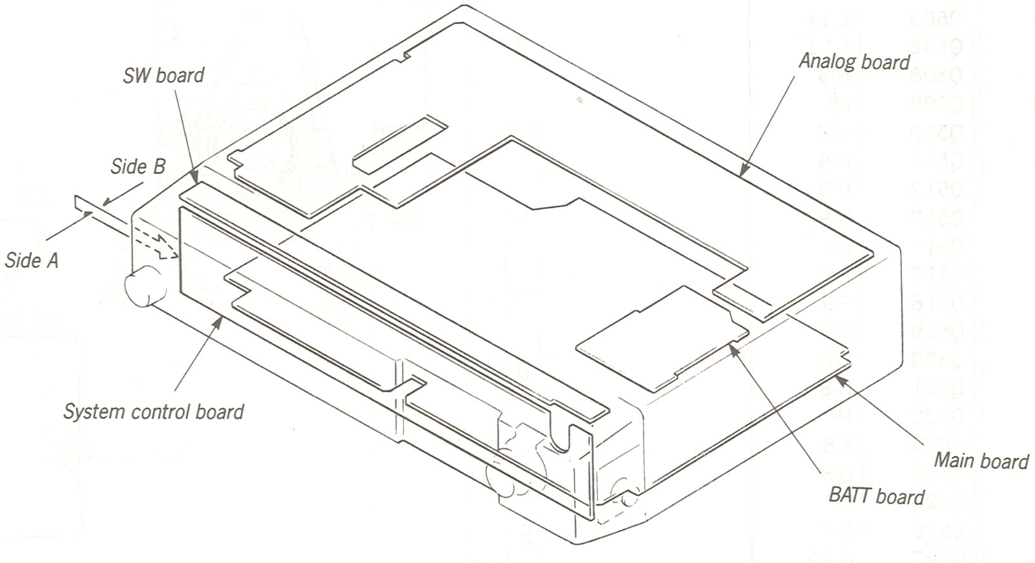

Oscilloscope
+
−
CN307
BLU
BLU
2
1
C341
C342
IC310
24
21
18
15
13
1
4
7
10
12
RV202
RV102

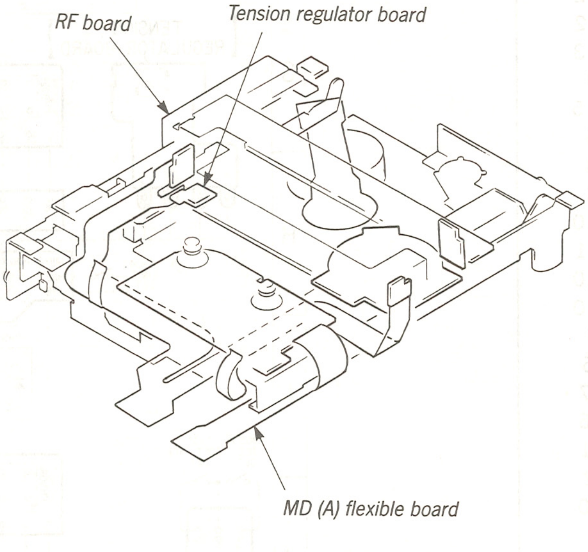
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM


LINE IN
CNJ901-1
MIC
J901
MIC AMP Q101 IC301
REC LEVEL RV302-3
LIMITER AMP IC302
PRE-EMPHASIS IC303
FL301 FILTER
SAMPLE HOLD IC101 Q102
VL AMP IC305
X301 81.05KHz
A/D CONVERTER IC306
R-CH
MUTING Q301
SWITCHING Q302
LIMITER SWITCH IC304
S17 MIC LIMITER
OFF
ON
DIGITAL FILTER IC311
1-4, 17-28
1-16
D/A CONVERTER IC310
AF AMP CP301
R-CH
COUNTER IC314
COUNTER IC315
IC316
VCO IC313
VCO CONTROL IC312
PLL
LR CLOCK
MUTING Q104
LEVEL METER AMP IC308
LED DRIVE IC4 Q2 Q3
SWITCHING Q105
LINE OUT
CNJ901-3
VOLUME RV303-1
AF AMP IC307
POWER AMP IC309
SP901
MUTING Q103
MUTING Q303,305
B+
HEADPHONES
J903
SWITCHING Q307 Q308
SWITCHING Q306
A HEAD
B HEAD
RF REC/PB EQ BLOCK
SW OUT
REC SIGNAL
PB SIGNAL
SUBCODE SYNC SIGNAL
X504 18.816MHz
REDT
PBDT
SBSY
VCO IN
VCO OUT
PHCO
8-10 MODULATION /DEMODULATION IC529
DPG PULSE IN
RF SIGNAL
PB ATF SIGNAL
VCO IC525 IC526
LPF IC526
RAM IC527 IC528
X502 22.5792MHz
X503 24.576MHz
ADDT
LRCK
LR CLOCK
CORRECTION DADT
ERROR IC530
MUTING CONTROL SIGNAL
ND1
LCD
KEY IN IC2
X1 32.768KHz
CLOCK OSC IC3
LCD DRIVE IC1
S903-1
S903-2
S904
S905-1
S905-2
REC DET
SOFT TAPE DET
SBSY
LIMIT DET
INPUT DET IC506
1.5 SPEED DET
SDI
CASSETTE DET
DEW IN
DEW SENSOR
COMPARATOR IC522
SWITCHING IC524 IC531
CONTROL IC523
Q527, 528 ATF SWITCHING
Q527
Q528
RV505
RV504
RF AMP Q540 Q541 Q542
RF IN
CAPSTAN SERVO RF DET IC515
RF DET OUT
SYNC SIGNAL
TRACKING ERROR
ATF ON/OFF
BUFFER IC514
BUFFER IC514
BUFFER IC513 IC514
RV503
Q538 ATF ON/OFF
SWITCHING Q529
SWITCHING Q530
SWITCHING IC513
IC514 FILTER
SWITCHING IC510
EMPHASIS
AUDIO MUTING
BACK LIGHT
SWITCHING Q1
PAUSE
PB
REC
DRUM PG SIGNAL
TAPE DIRECTION
SYSTEM CONTROL IC507
DC/DC CONVERTER ON/OFF
CAPSTAN MOTOR ROTATION DIRECTION
ATF ON/OFF
DRUM SERVO ON/OFF
TENSION REGULATOR & D/A OUTPUT SWITCHING
X501 4.19MHz
SWITCHING Q531
CAPSTAN MOTOR
CAPSTAN DRIVE IC517
POWER ON/OFF
S REEL MOTOR FG
T REEL MOTOR FG
RV506
PLUNGER DRIVE Q519 Q520 Q521 Q526
BRAKE
PL-
PLUNGER DRIVE Q522 Q523 Q524 Q525
PL+
SWITCHING Q513 Q514
LED ON
PHOTO COUPPLER PH902
SUPPLY SIDE
SWITCHING Q511 Q512
PHOTO COUPPLER PH901
TAKE UP SIDE
COMPARATOR IC508
BUFFER IC509
TAPE TOP/END DET Q509 Q510
SWITCHING Q539
TAPE LOADING MOTOR DRIVE IC512
LOADING MOTOR
BUFFER IC504
TENSION REGULATOR
HALL DEVICE
COMPARATOR IC521
RV502
SWITCHING IC510
DCAMP IC511
REEL MOTOR DRIVE Q517, Q518
SREEL MOTOR
SWITCHING Q805 Q806 Q807
SWITCHING Q804
REG Q508
COMPARATOR IC504
D/A CONVERTER IC505
BUFFER Q543 Q544
BUFFER Q545 Q546
PWM DRIVE IC511 IC533
BUFFER Q550
T REEL MOTOR
RIPPLE FILTER Q304
SWITCHING Q801 Q802
RIPPLE FILTER Q309 Q310
RIPPLE FILTER Q311 Q312
+5V
-5V
+15V
-15V
DC/DC CONVERTER IC803
B+
B-
REG IC801
RESET IC802
BATTERY PACK (NP-22H) 6V
DRUM FG
FG SIGNAL AMP Q536 IC519
WAVE SHAPER IC520
PG SIGNAL AMP Q537 IC519
WAVE SHAPER IC520
SWITCHING Q534 Q535
DRUM MOTOR
DRUM DRIVE IC518
BUFFER IC503
Q501 Q502
Q503 Q504
Q505 Q506
BUFFER
DRUM BRAKE Q533
DRUM ON/OFF Q532
DRUM FG SIGNAL
CAPSTAN PHASE COMPARATOR OUT
DPG PULSE IN
SW PULSE OUT
CAPSTAN FG OUT
DRUM PG SIGNAL
BIAS PWN
DRUM SERVO IC502
PHASE PWM
SPEED PWN
DRUM BRAKE
DPG GENERATOR IC501
MULTIVIBRATOR IC516
WAVE SHAPER IC521 IC522
CAPSTAN MOTOR FG

5-2. CIRCUIT BOARDS LOCATION


SW board
Analog board
Side B
Side A
System control board
Main board
BATT board

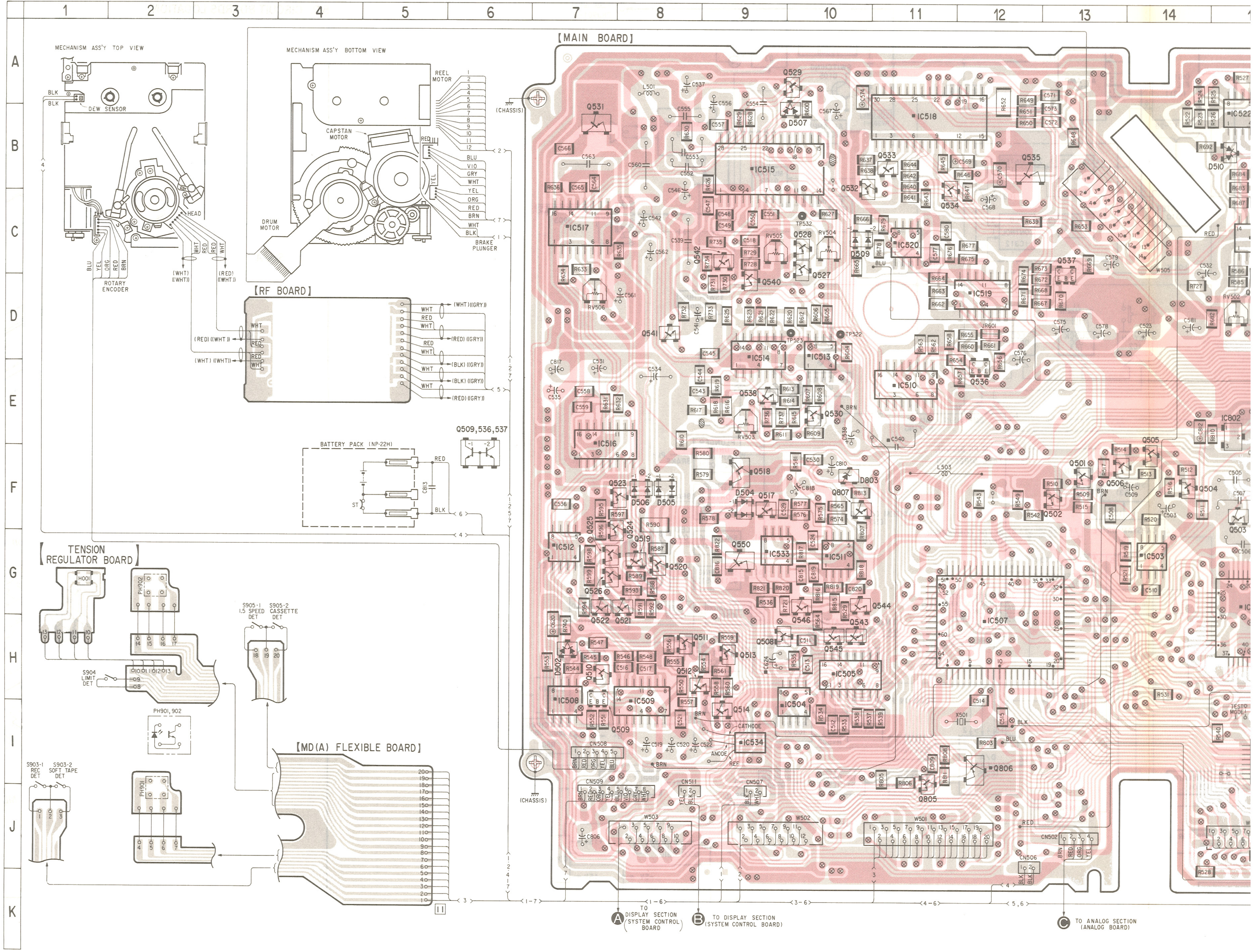

RF board
Tension regulator board
MD (A) flexible board

5-3. PRINTED WIRING BOARD—MAIN SECTION—

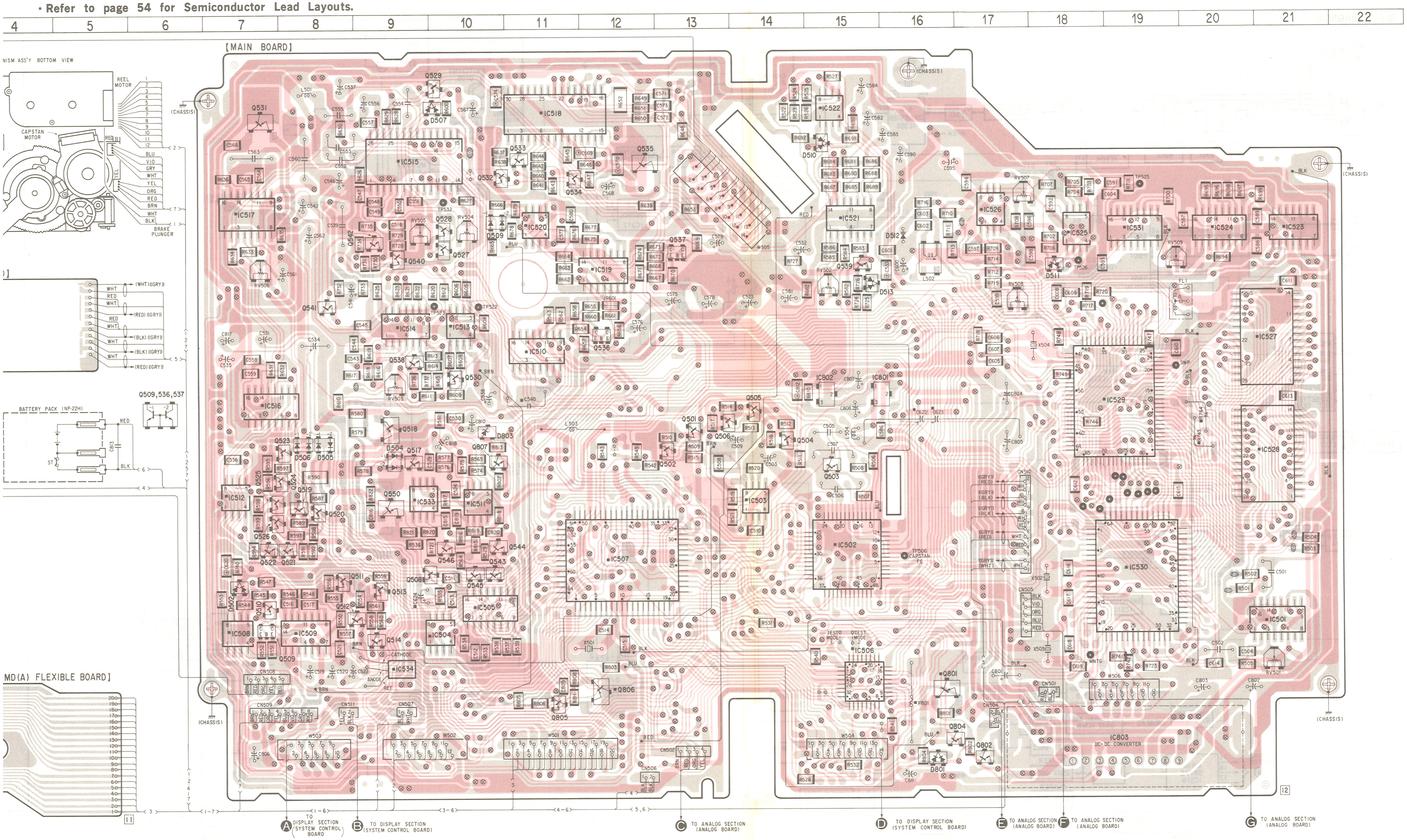
- Refer to page 33 for Circuit Boards Location.
- Refer to page 40 for Note.
- Refer to page 54 for Semiconductor Lead Layouts.

● Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D502	H-7	Q501	F-13
D504	F-9	Q502	F-13
D505	F-8	Q503	F-15
D506	F-8	Q504	F-14
D507	B-10	Q505	E-14
D509	C-10	Q506	F-13
D510	B-15	Q508	H-9
D511	D-18	Q509	I-8
D512	C-16	Q510	H-7
D513	D-16	Q511	H-9
D801	J-16	Q512	H-8
D803	F-10	Q513	H-9
		Q514	I-9
IC501	H-21	Q517	F-9
IC502	G-15	Q518	F-9
IC503	G-14	Q519	G-8
IC504	I-10	Q520	G-8
IC505	H-10	Q521	H-8
IC506	I-15	Q522	H-7
IC507	H-12	Q523	F-8
IC508	I-7	Q524	G-8
IC509	I-8	Q525	F-7
IC510	E-11	Q526	G-7
IC511	G-10	Q527	C-10
IC512	G-7	Q528	C-10
IC513	D-10	Q529	A-10
IC514	D-9	Q530	E-10
IC515	B-9	Q531	B-7
IC516	E-7	Q532	B-10
IC517	C-7	Q533	B-11
IC518	B-11	Q534	C-11
IC519	D-12	Q535	B-12
IC520	C-11	Q536	E-12
IC521	C-15	Q537	C-13
IC522	B-15	Q538	E-9
IC523	C-21	Q539	D-15
IC524	C-20	Q540	D-9
IC525	C-18	Q541	D-8
IC526	C-17	Q542	C-8
IC527	E-21	Q543	H-10
IC528	F-21	Q544	G-11
IC529	E-19	Q545	H-10
IC530	H-19	Q546	H-10
IC531	C-19	Q550	G-9
IC533	G-9	Q801	I-16
IC534	I-9	Q802	J-17
IC801	E-15	Q804	J-16
IC802	E-15	Q805	J-11
IC803	J-19	Q806	I-12
		Q807	F-10
PH901	J-2		
PH902	G-2		

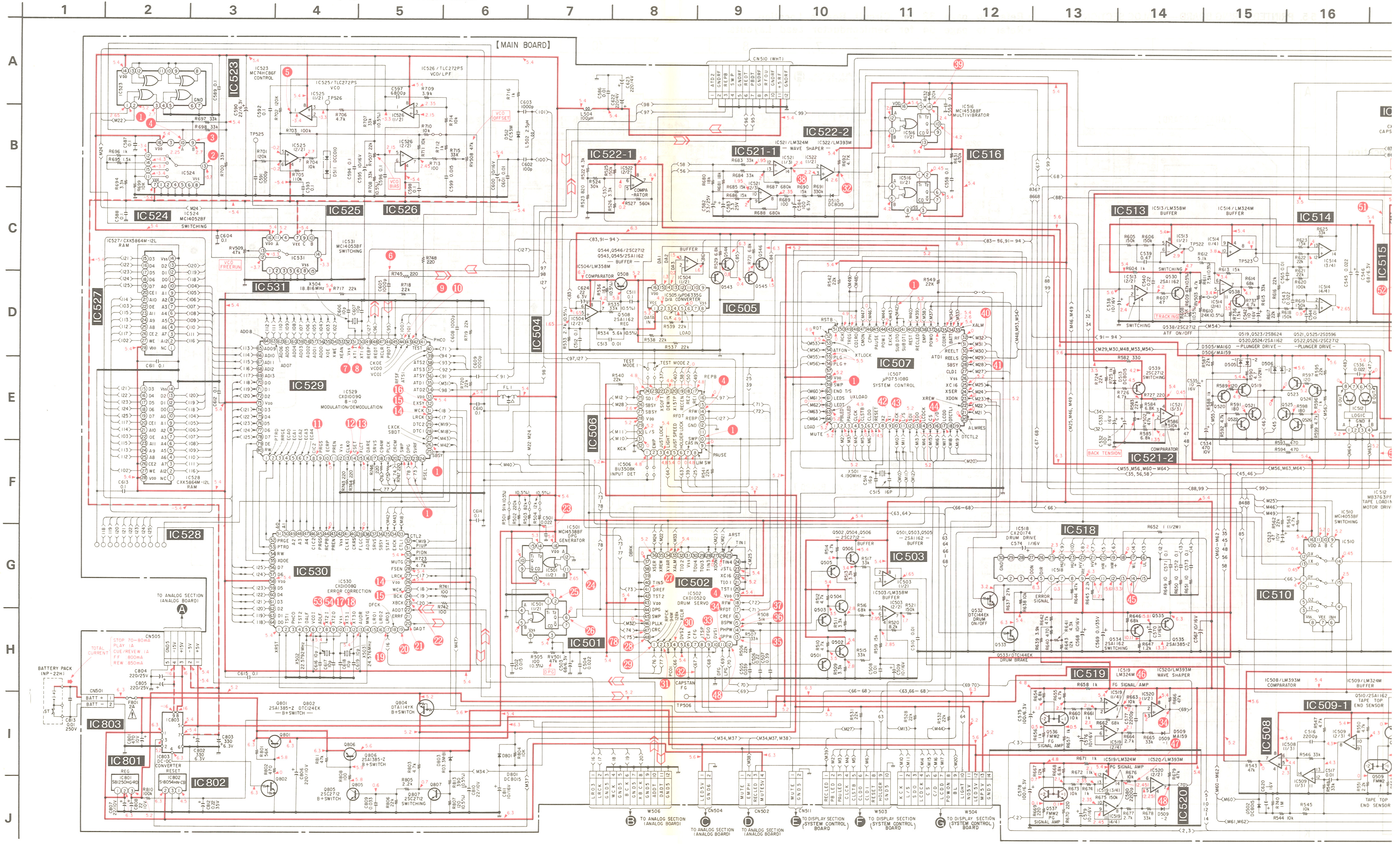

1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
J
K
MECHANISM ASS'Y TOP VIEW
DEW SENSOR
HEAD
ROTARY ENCODER
MECHANISM ASS'Y BOTTOM VIEW
REEL MOTOR
CAPSTAN MOTOR
DRUM MOTOR
BRAKE PLUNGER
(CHASSIS)
[MAIN BOARD]
[RF BOARD]
BATTERY PACK (NP-22H)
Q509,536,537
[TENSION REGULATOR BOARD]
S905-1 1.5 SPEED DET
S905-2 CASSETTE DET
S904 LIMIT DET
PH901, 902
S903-1 REC DET
S903-2 SOFT TAPE DET
[MD(A) FLEXIBLE BOARD]
IC515
IC517
IC518
IC519
IC520
IC510
IC513
IC514
IC516
IC512
IC533
IC511
IC507
IC508
IC509
IC505
IC504
IC534
IC503
IC802
A TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
B TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
C TO ANALOG SECTION (ANALOG BOARD)

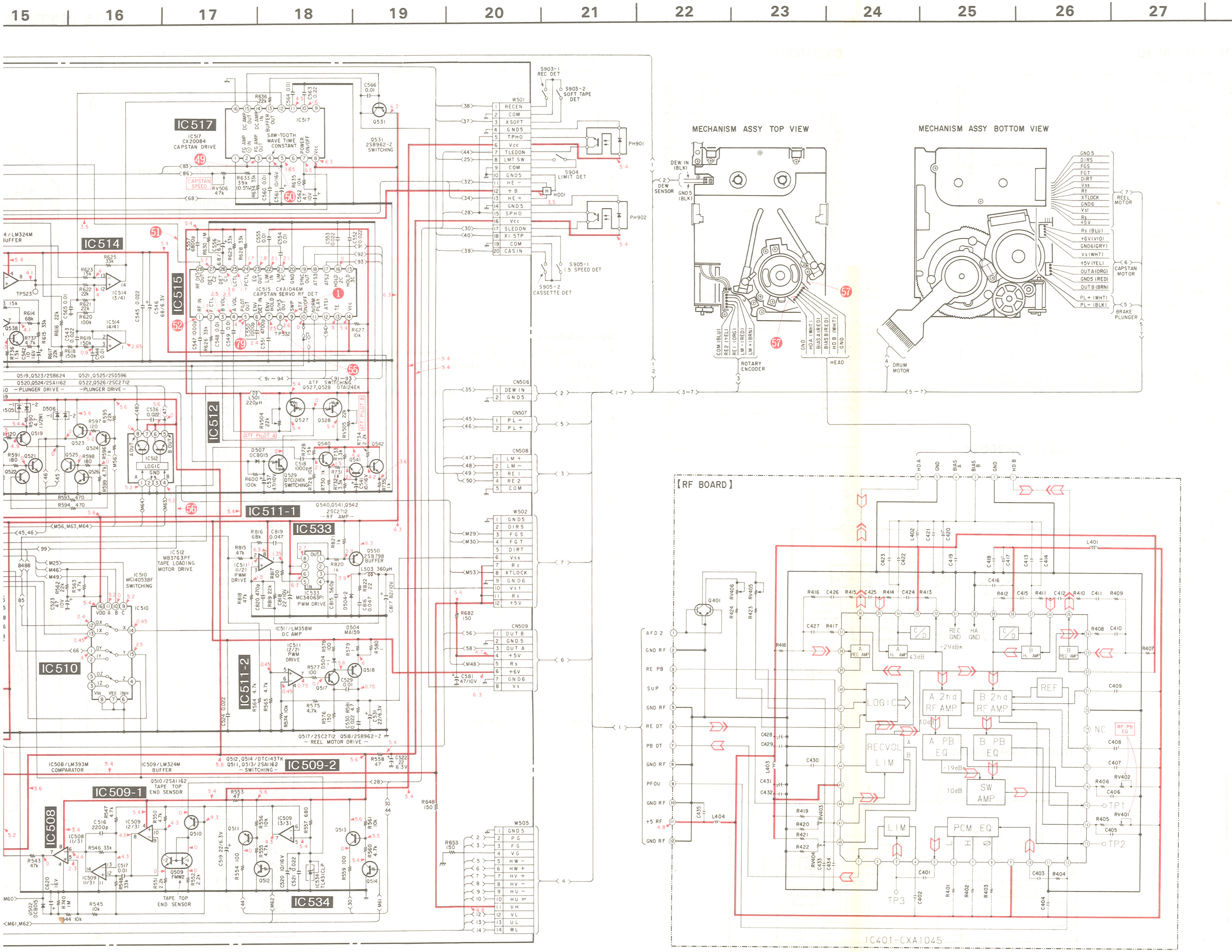
- Refer to page 33 for Circuit Boards Location.
- Refer to page 40 for Note.
- Refer to page 54 for Semiconductor Lead Layouts.


4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
[MAIN BOARD]
NISM ASS'Y BOTTOM VIEW
REEL MOTOR
CAPSTAN MOTOR
BRAKE PLUNGER
BATTERY PACK (NP-22H)
MD(A) FLEXIBLE BOARD]
(CHASSIS)
IC501 IC502 IC503 IC504 IC505 IC506 IC507 IC508 IC509 IC510 IC511 IC512 IC513 IC514 IC515 IC516 IC517 IC518 IC519 IC520 IC521 IC522 IC523 IC524 IC525 IC526 IC527 IC528 IC529 IC530 IC531 IC533 IC534 IC801 IC802
IC803 DC-DC CONVERTER
TP506 CAPSTAN FG
TEST0 MODE1
TEST MODE
Ⓐ TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
Ⓑ TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
Ⓒ TO ANALOG SECTION (ANALOG BOARD)
Ⓓ TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
Ⓔ TO ANALOG SECTION (ANALOG BOARD)
Ⓕ TO ANALOG SECTION (ANALOG BOARD)
Ⓖ TO ANALOG SECTION (ANALOG BOARD)
11
12

5-4. SCHEMATIC DIAGRAM—MAIN SECTION—

- Refer to page 41 for IC Block Diagrams.
- Refer to page 55 for Waveforms.


[MAIN BOARD]
IC523
IC524
IC525
IC526
IC527
IC528
IC529
IC530
IC531
IC501
IC502
IC503
IC504
IC505
IC506
IC507
IC508
IC509-1
IC510
IC513
IC514
IC515
IC516
IC518
IC519
IC520
IC521-1
IC521-2
IC522-1
IC522-2
IC801
IC802
IC803
CN510 (WHT)
CN505
CN501
CN502
CN504
CN511
W503
W504
W506
BATTERY PACK INP-22H
TO ANALOG SECTION (ANALOG BOARD)
TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
TOTAL CURRENT STOP 70~80mA PLAY 1A CUE/REVIEW 1A FF 800mA REW 850mA


15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
A
B
C
D
E
F
G
H
I
J
IC517
IC517 CX20084 CAPSTAN DRIVE
SAW-TOOTH WAVE TIME CONSTANT
Q531 2SB962-Z SWITCHING
W501
IC514
IC515
IC515 CXA1046M CAPSTAN SERVO RF DET
IC512
IC512 LOGIC
IC511-1
IC533
IC533 MC34063P1 PWM DRIVE
IC511-2
IC510
IC510 MC14053BF SWITCHING
IC509-2
IC509-1
IC508
IC534
IC512 MB3763PF TAPE LOADING MOTOR DRIVE
IC508/LM393M COMPARATOR
IC509/LM324M BUFFER
Q510/2SA1162 TAPE TOP END SENSOR
TAPE TOP END SENSOR
Q517/2SC2712 Q518/2SB962-Z REEL MOTOR DRIVE
Q512,Q514/DTC143TK Q511,Q513/2SA1162 SWITCHING
Q519,Q523/2SB624 Q520,Q524/2SA1162 PLUNGER DRIVE
Q521,Q525/2SD596 Q522,Q526/2SC2712 PLUNGER DRIVE
Q527,Q528 DTA124EK ATF SWITCHING
Q529 DTC124EK SWITCHING
Q540,Q541,Q542 2SC2712 RF AMP
Q550 2SB798 BUFFER
IC511/LM358M DC AMP
IC511 (2/2) PWM DRIVE
ATF PILOT A
ATF PILOT B
CAPSTAN SPEED
CN506
CN507
CN508
CN509
W502
W505
S903-1 REC DET
S903-2 SOFT TAPE DET
S904 LIMIT DET
S905-1 1.5 SPEED DET
S905-2 CASSETTE DET
PH901
PH902
H001
MECHANISM ASSY TOP VIEW
MECHANISM ASSY BOTTOM VIEW
DEW IN (BLK)
DEW SENSOR
GND5 (BLK)
ROTARY ENCODER
HEAD
DRUM MOTOR
REEL MOTOR
CAPSTAN MOTOR
BRAKE PLUNGER
[RF BOARD]
LOGIC
A 2nd RF AMP
B 2nd RF AMP
REF
RECVOL LIM
A PB EQ
B PB EQ
SW AMP
LIM
PCM EQ
REC AMP
NC
TP1
TP2
TP3
IC401-CXA1045

Note on Schematic Diagram:

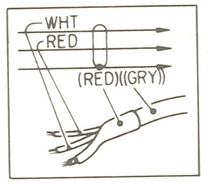
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ▬▬ : B+ Line
- ▬ ▬ ▬ : B– Line
- ☐ : adjustment for repair.
- Power voltage is dc 6.3V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are cassette tape to insert with respect to ground under no-signal conditions.
  no mark : STOP mode
  ( ): REC mode
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⊳ : PB
  ⊳⊳ : REC
- Switch

Ref. No.	Switch	Positiom
S903	REC DET /SOFT TAPE DET	OFF
S904	LIMIT DET	OFF
S905	1.5 SPEED DET /CASSETTE DET	OFF

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

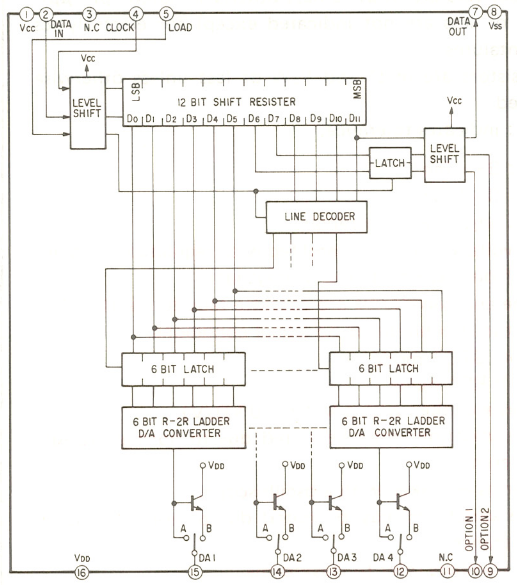
Note on Mounting Diagram:

- Color code or sleeving over the end of the jacket.

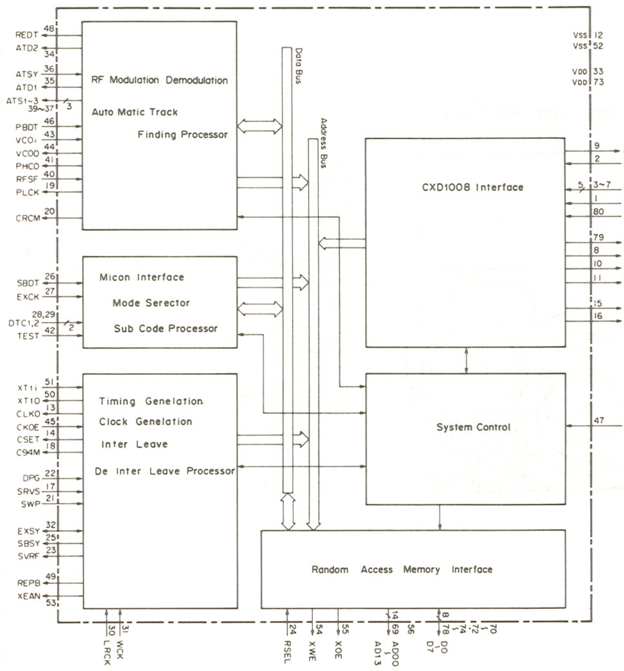

WHT
RED
(RED)((GRY))

- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ⊗ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

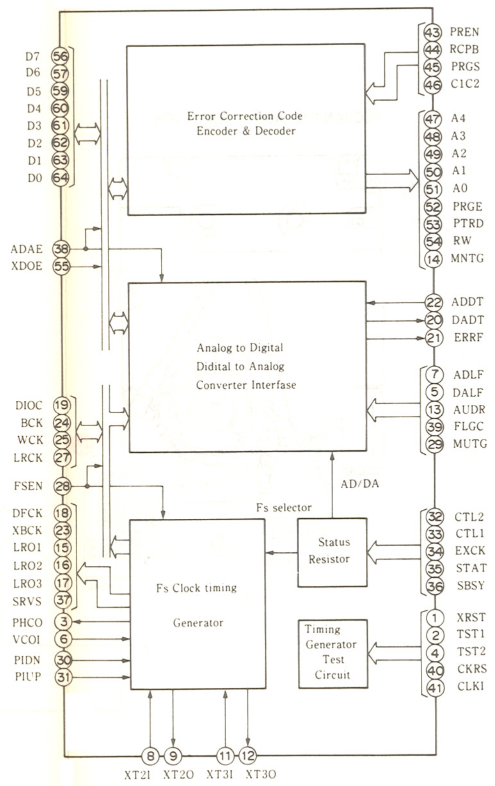
IC505 µPD6335G


12 BIT SHIFT RESISTER
LEVEL SHIFT
LATCH
LINE DECODER
6 BIT LATCH
6 BIT R−2R LADDER D/A CONVERTER
Vcc
DATA IN
N.C
CLOCK
LOAD
DATA OUT
Vss
VDD
DA1
DA2
DA3
DA4
OPTION 1
OPTION 2

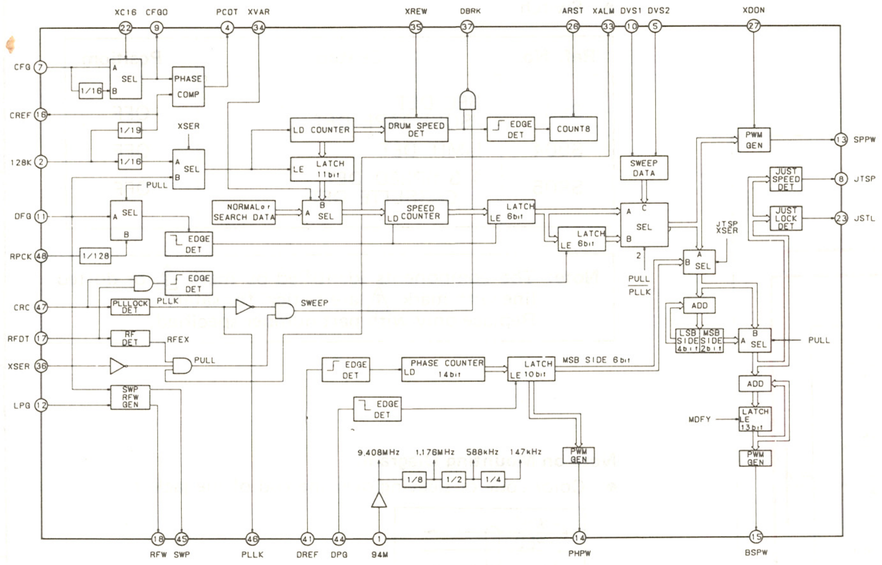
IC528 CXD1009Q


RF Modulation Demodulation
Auto Matic Track Finding Processor
CXD1008 Interface
Micon Interface
Mode Serector
Sub Code Processor
Timing Genelation
Clock Genelation
Inter Leave
De Inter Leave Processor
System Control
Random Access Memory Interface
Data Bus
Address Bus

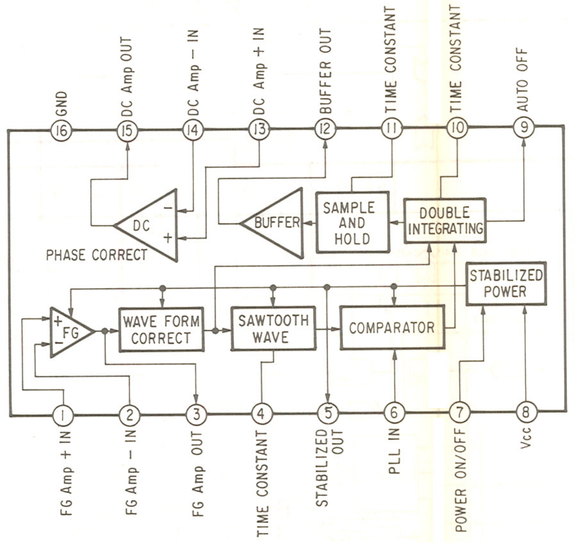
IC530 CXD1008Q


Error Correction Code Encoder & Decoder
Analog to Digital Didital to Analog Converter Interfase
AD/DA
Fs selector
Fs Clock timing Generator
Status Resistor
Timing Generator Test Circuit
PREN
RCPB
PRGS
C1C2
PRGE
PTRD
RW
MNTG
ADDT
DADT
ERRF
ADLF
DALF
AUDR
FLGC
MUTG
CTL2
CTL1
EXCK
STAT
SBSY
XRST
TST1
TST2
CKRS
CLKI
XT2I
XT2O
XT3I
XT3O

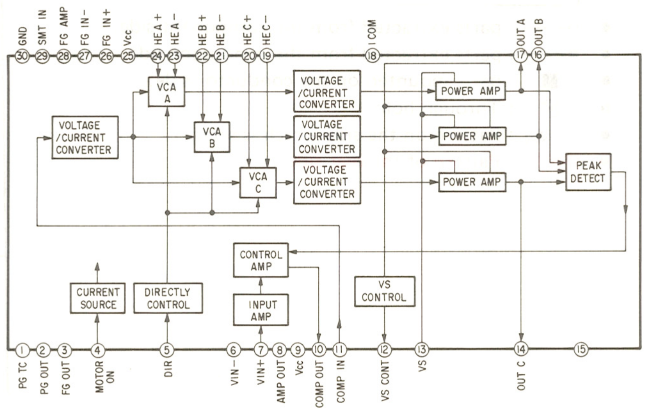
IC502 CXD1052Q


SEL
PHASE COMP
LD COUNTER
DRUM SPEED DET
EDGE DET
COUNTE
SWEEP DATA
PWM GEN
SPEED COUNTER
LATCH
NORMAL/SEARCH DATA
SWEEP
PHASE COUNTER
ADD
SPPW
JTSP
JSTL
RFW
SWP
PLLK
DREF
DPG
94M
PHPW
BSPW

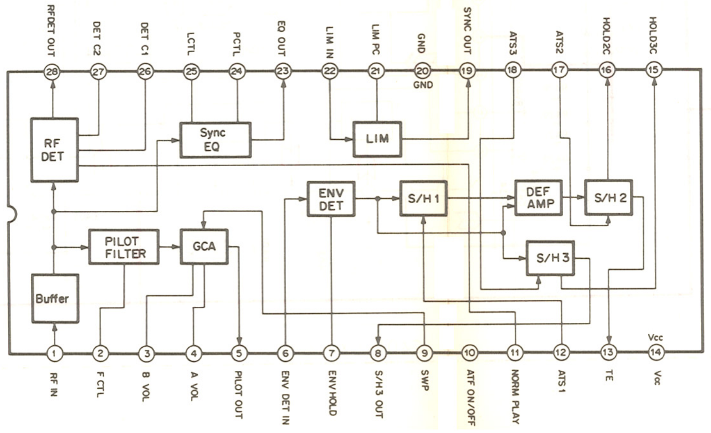
IC517 CX20084


GND
DC Amp OUT
DC Amp − IN
DC Amp + IN
BUFFER OUT
TIME CONSTANT
TIME CONSTANT
AUTO OFF
DC
PHASE CORRECT
BUFFER
SAMPLE AND HOLD
DOUBLE INTEGRATING
STABILIZED POWER
FG
WAVE FORM CORRECT
SAWTOOTH WAVE
COMPARATOR
FG Amp + IN
FG Amp − IN
FG Amp OUT
TIME CONSTANT
STABILIZED OUT
PLL IN
POWER ON/OFF
Vcc

IC518 CX20174

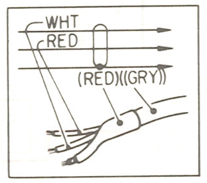

VCA A
VCA B
VCA C
VOLTAGE /CURRENT CONVERTER
POWER AMP
PEAK DETECT
CONTROL AMP
CURRENT SOURCE
DIRECTLY CONTROL
INPUT AMP
VS CONTROL
GND
FG AMP
FG IN−
FG IN+
Vcc
OUT A
OUT B
FG TC
FG OUT
MOTOR ON
DIR
VIN−
VIN+
AMP OUT
COMP OUT
COMP IN
VS CONT
VS
OUT C

IC515 CXA1046M


RF DET
Sync EQ
LIM
ENV DET
S/H 1
DEF AMP
S/H 2
PILOT FILTER
GCA
S/H 3
Buffer
GND
Vcc
RF IN
F CTL
B VOL
A VOL
PILOT OUT
ENV DET IN
ENV HOLD
S/H3 OUT
SWP
ATF ON/OFF
NORM PLAY
ATS 1
TE

Note on Mounting Diagram:

- Color code or sleeving over the end of the jacket.


WHT
RED
(RED)((GRY))

- ○—— : parts extracted from the component side.
- ●—— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ⊗ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.
- ☐ : Chip components extracted from the rear side.

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- ━━ : B+ Line
- ━ ━ ━ : B– Line
- ☐ : adjustment for repair.
- Power voltage is dc 6.3V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are cassette tape to insert with respect to ground under no-signal conditions.
  no mark : STOP mode
  ( ): REC mode
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⊳ : PB
  ⊳⊳ : REC
- Switch

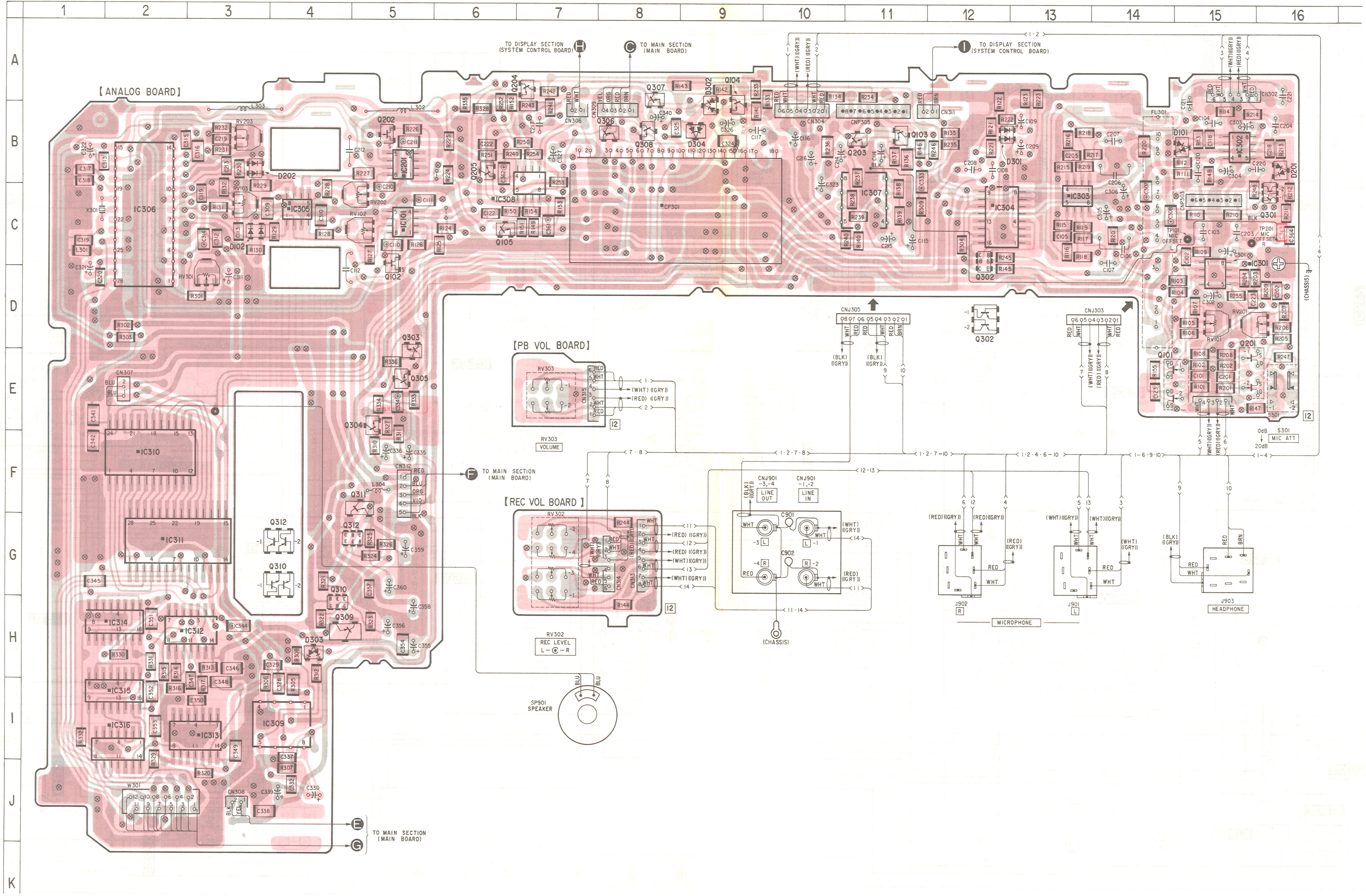
Ref. No.	Switch	Position
S301	MIC ATT	OdB

● Semiconductor Location

Ref. No.	Location
D101	B-15
D102	C-3
D201	B-16
D202	B-4
D301	B-13
D302	A-9
D303	H-4
D304	B-9
IC101	C-5
IC201	B-5
IC301	C-16
IC302	B-15
IC303	C-13
IC304	C-12
IC305	C-4
IC306	C-2
IC307	C-11
IC308	C-6
IC309	I-4
IC310	F-2
IC311	G-2
IC312	H-3
IC313	I-3
IC314	H-2
IC315	I-2
IC316	I-2
Q101	E-14
Q102	D-5
Q103	B-11
Q104	A-9
Q105	C-6
Q201	D-15
Q202	B-5
Q203	B-11
Q204	A-6
Q205	B-6
Q301	C-16
Q302	D-12
Q303	D-5
Q304	E-5
Q305	E-5
Q306	B-8
Q307	A-8
Q308	B-8
Q309	H-4
Q310	G-4
Q311	F-5
Q312	G-4

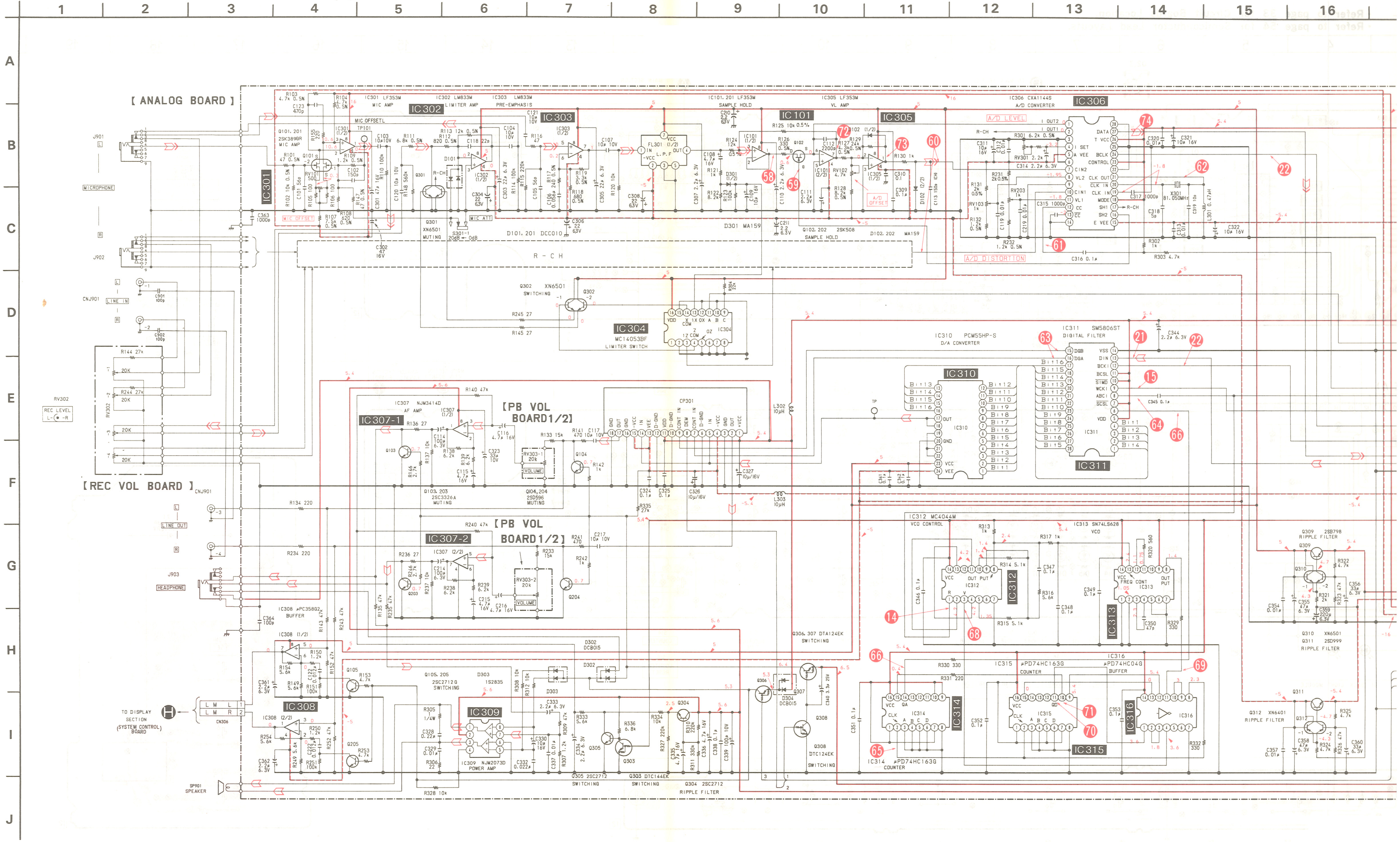
5-5. PRINTED WIRING BOARD—ANALOG SECTION—

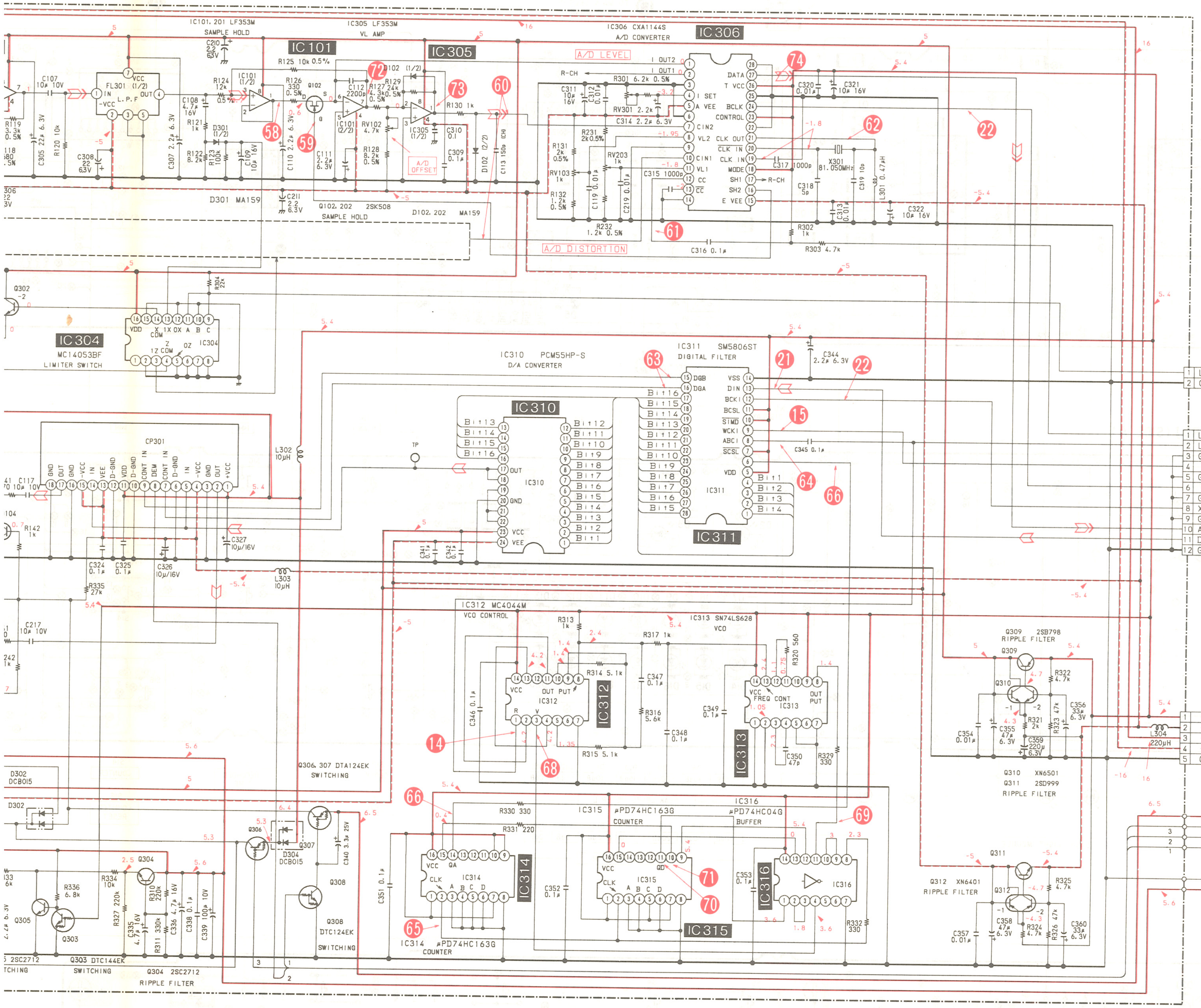
- Refer to page 33 for Circuit Boards Location.
- Refer to page 54 for Semiconductor Lead Layouts.


[ANALOG BOARD]
[PB VOL BOARD]
[REC VOL BOARD]
TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
TO MAIN SECTION (MAIN BOARD)
TO MAIN SECTION (MAIN BOARD)
TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
TO MAIN SECTION (MAIN BOARD)
RV303 VOLUME
RV302 REC LEVEL L—R
SP901 SPEAKER
CNJ901 -3,-4 LINE OUT
CNJ901 -1,-2 LINE IN
(CHASSIS)
J902 R
J901 L
MICROPHONE
J903 HEADPHONE
S301 MIC ATT 0dB 20dB
TP101 MIC OFFSET L
TP201 MIC OFFSET R
IC306
IC305
IC101
IC308
IC310
IC311
IC314
IC312
IC315
IC316
IC313
IC309
IC307
IC304
IC303
IC302
IC301
CP301
CN307
CN308
CNJ305
CNJ303
W301
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J K

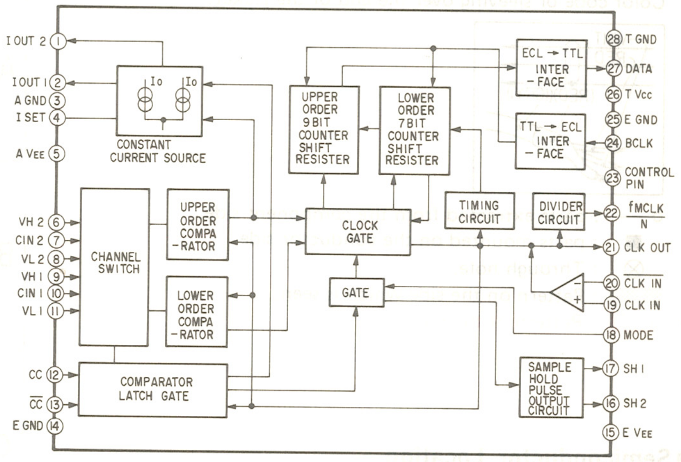
5-6. SCHEMATIC DIAGRAM—ANALOG SECTION—

- Refer to page 42 for Note.
- Refer to page 55 for Waveforms.

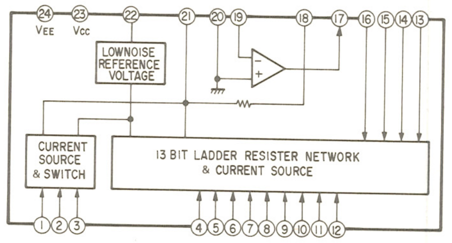

[ANALOG BOARD]
[REC VOL BOARD]
[PB VOL BOARD1/2]
[PB VOL BOARD1/2]
IC301 LF353M MIC AMP
IC302 LM833M LIMITER AMP
IC303 LM833M PRE-EMPHASIS
IC101, 201 LF353M SAMPLE HOLD
IC305 LF353M VL AMP
IC306 CXA1144S A/D CONVERTER
IC304 MC14053BF LIMITER SWITCH
IC307 NJM3414D AF AMP
IC308 μPC358G2 BUFFER
IC309 NJM2073D POWER AMP
IC310 PCM55HP-S D/A CONVERTER
IC311 SM5806ST DIGITAL FILTER
IC312 MC4044M VCO CONTROL
IC313 SN74LS628 VCO
IC314 μPD74HC163G COUNTER
IC315 μPD74HC163G COUNTER
IC316 μPD74HC04G BUFFER
Q101, 201 2SK389GR MIC AMP
Q301 XN6501 MUTING
Q302 XN6501 SWITCHING
Q102, 202 2SK508 SAMPLE HOLD
Q103, 203 2SC3326A MUTING
Q104, 204 2SD596 MUTING
Q105, 205 2SC2712G SWITCHING
Q305 2SC2712 SWITCHING
Q303 DTC144EK SWITCHING
Q304 2SC2712 RIPPLE FILTER
Q306, 307 DTA124EK SWITCHING
Q308 DTC124EK SWITCHING
Q309 2SB798 RIPPLE FILTER
Q310 XN6501
Q311 2SD999 RIPPLE FILTER
Q312 XN6401 RIPPLE FILTER
D101, 201 DCC010
D301 MA159
D102, 202 MA159
D302 DCB015
D303 1S2835
D304 DCB015
FL301 L.P.F
X301 81.050MHz
J901 MICROPHONE
J902
CNJ901 LINE IN
CNJ901 LINE OUT
J903 HEADPHONE
RV302 REC LEVEL
RV303-1 VOLUME
RV303-2 VOLUME
SP901 SPEAKER
TO DISPLAY SECTION (SYSTEM CONTROL) BOARD
CN306
CP301
R-CH
MIC OFFSET
MIC ATT
A/D OFFSET
A/D LEVEL
A/D DISTORTION
S301-1 20dB ↔ 0dB
14
15
21
22
58
59
60
61
62
63
64
65
66
68
69
70
71
72
73
74
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J


8
9
10
11
12
13
14
15
16
17
18
19
IC101, 201 LF353M SAMPLE HOLD
IC101
IC305 LF353M VL AMP
IC305
IC306 CXA1144S A/D CONVERTER
IC306
A/D LEVEL
A/D OFFSET
A/D DISTORTION
X301 81.050MHz
D301 MA159
Q102, 202 2SK508 SAMPLE HOLD
D102, 202 MA159
IC304
MC14053BF LIMITER SWITCH
CP301
IC310 PCM55HP-S D/A CONVERTER
IC310
IC311 SM5806ST DIGITAL FILTER
IC311
IC312 MC4044M VCO CONTROL
IC312
IC313 SN74LS628 VCO
IC313
IC314 μPD74HC163G COUNTER
IC314
IC315 μPD74HC163G COUNTER
IC315
IC316 μPD74HC04G BUFFER
IC316
Q306, 307 DTA124EK SWITCHING
Q308 DTC124EK SWITCHING
Q303 DTC144EK SWITCHING
Q304 2SC2712 RIPPLE FILTER
Q309 2SB798 RIPPLE FILTER
Q310 XN6501
Q311 2SD999 RIPPLE FILTER
Q312 XN6401 RIPPLE FILTER
CN311
1 LIMITER
2 GND5
TO DISPLAY SECTION (SYSTEM CONTROL BOARD)
1 LRS3
2 LRCK
3 GND5
4 WCK
5 GND5
6 BCK
7 GND5
8 XBCK
9 GND5
10 ADDT
11 DADT
12 GND5
W301
TO MAIN SECTION (MAIN BORD)
1 +5V
2 -5V
3 +15V
4 -15V
5 GND
CN312
TO MAIN SECTION (MAIN BOARD)
CN309
4 MUTE5V
3 RECLED
2 EMPH
1 MUTE
TO MAIN SECTION (MAIN BOARD)
2 GND6
1 LED5V
CN308
TO MAIN SECTION (MAIN BOARD)
I
B
A
D
C

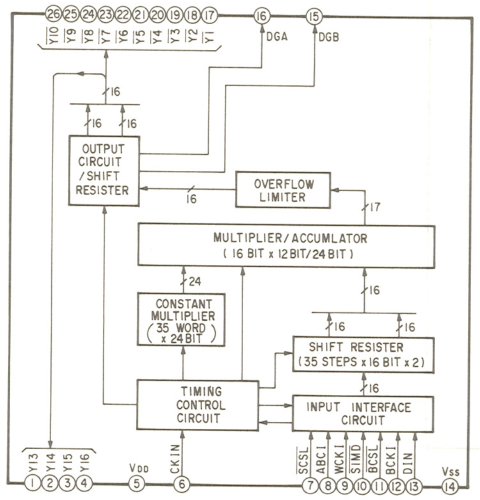
IC306 CXA1144S


I OUT 2
I OUT 1
A GND
I SET
A VEE
VH 2
CIN 2
VL 2
VH 1
CIN 1
VL 1
CC
CC
E GND
CONSTANT CURRENT SOURCE
CHANNEL SWITCH
UPPER ORDER COMPA-RATOR
LOWER ORDER COMPA-RATOR
COMPARATOR LATCH GATE
UPPER ORDER 9 BIT COUNTER SHIFT RESISTER
LOWER ORDER 7 BIT COUNTER SHIFT RESISTER
CLOCK GATE
GATE
TIMING CIRCUIT
DIVIDER CIRCUIT
ECL → TTL INTER-FACE
TTL → ECL INTER-FACE
SAMPLE HOLD PULSE OUTPUT CIRCUIT
T GND
DATA
T Vcc
E GND
BCLK
CONTROL PIN
fMCLK
CLK OUT
CLK IN
CLK IN
MODE
SH 1
SH 2
E VEE

IC310 PCM55HP-STA

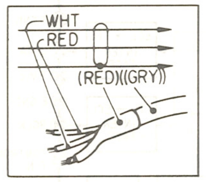

VEE
Vcc
LOWNOISE REFERENCE VOLTAGE
CURRENT SOURCE & SWITCH
13 BIT LADDER RESISTER NETWORK & CURRENT SOURCE

IC311 SM5806ST


DGA
DGB
OUTPUT CIRCUIT /SHIFT RESISTER
OVERFLOW LIMITER
MULTIPLIER/ACCUMLATOR (16 BIT x 12BIT/24 BIT)
CONSTANT MULTIPLIER (35 WORD x 24 BIT)
SHIFT RESISTER (35 STEPS x 16 BIT x 2)
TIMING CONTROL CIRCUIT
INPUT INTERFACE CIRCUIT
VDD
CKIN
SCSL
ABCI
WCKI
SIMD
BCSL
BCKI
DIN
Vss

Note on Mounting Diagram:

- Color code or sleeving over the end of the jacket.


WHT
RED
(RED)(GRY)

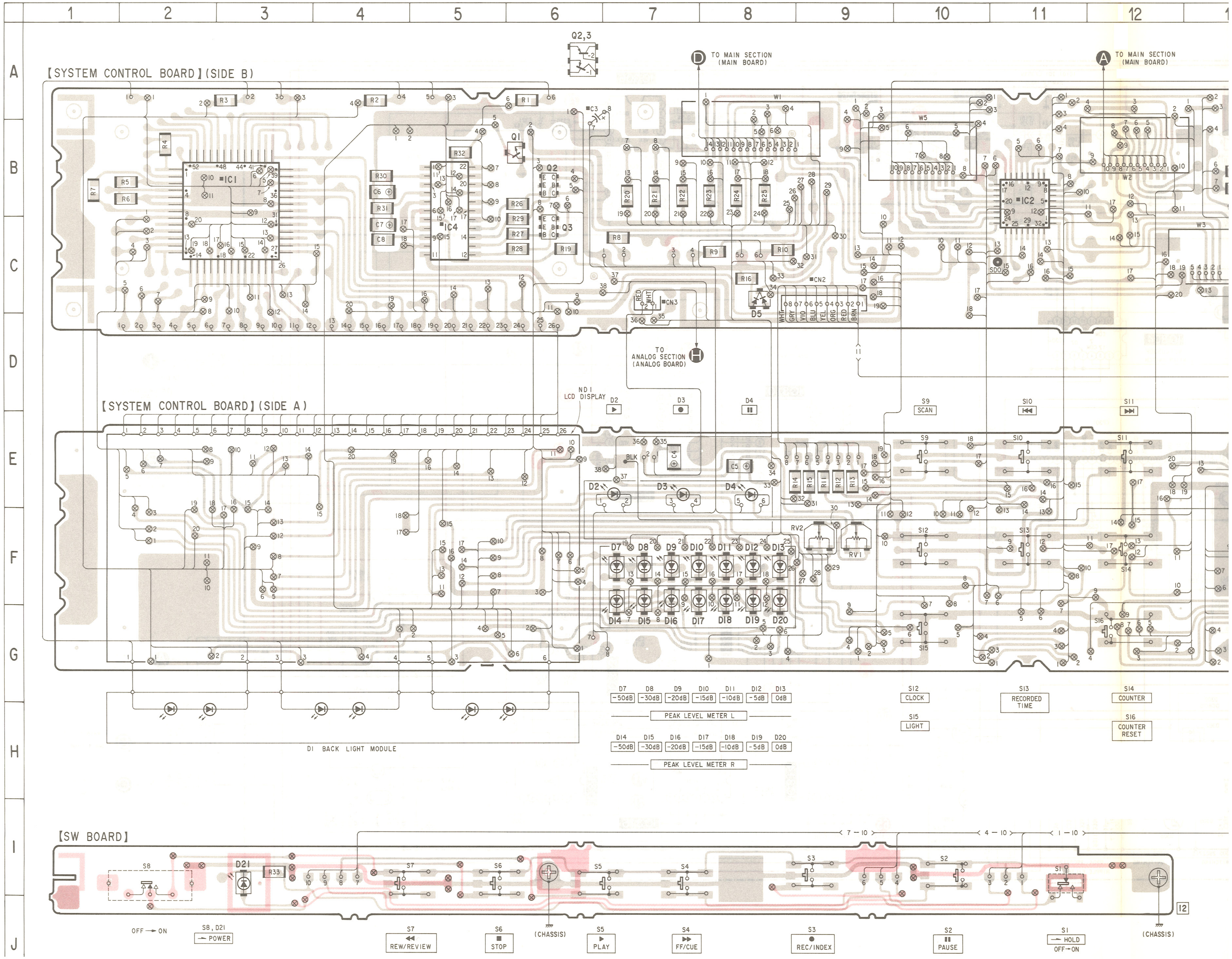
- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ⊗ : Through hole.
- ▨ : Pattern on the side which is seen.
- ▨ : Pattern of the rear side.

● Semiconductor Location

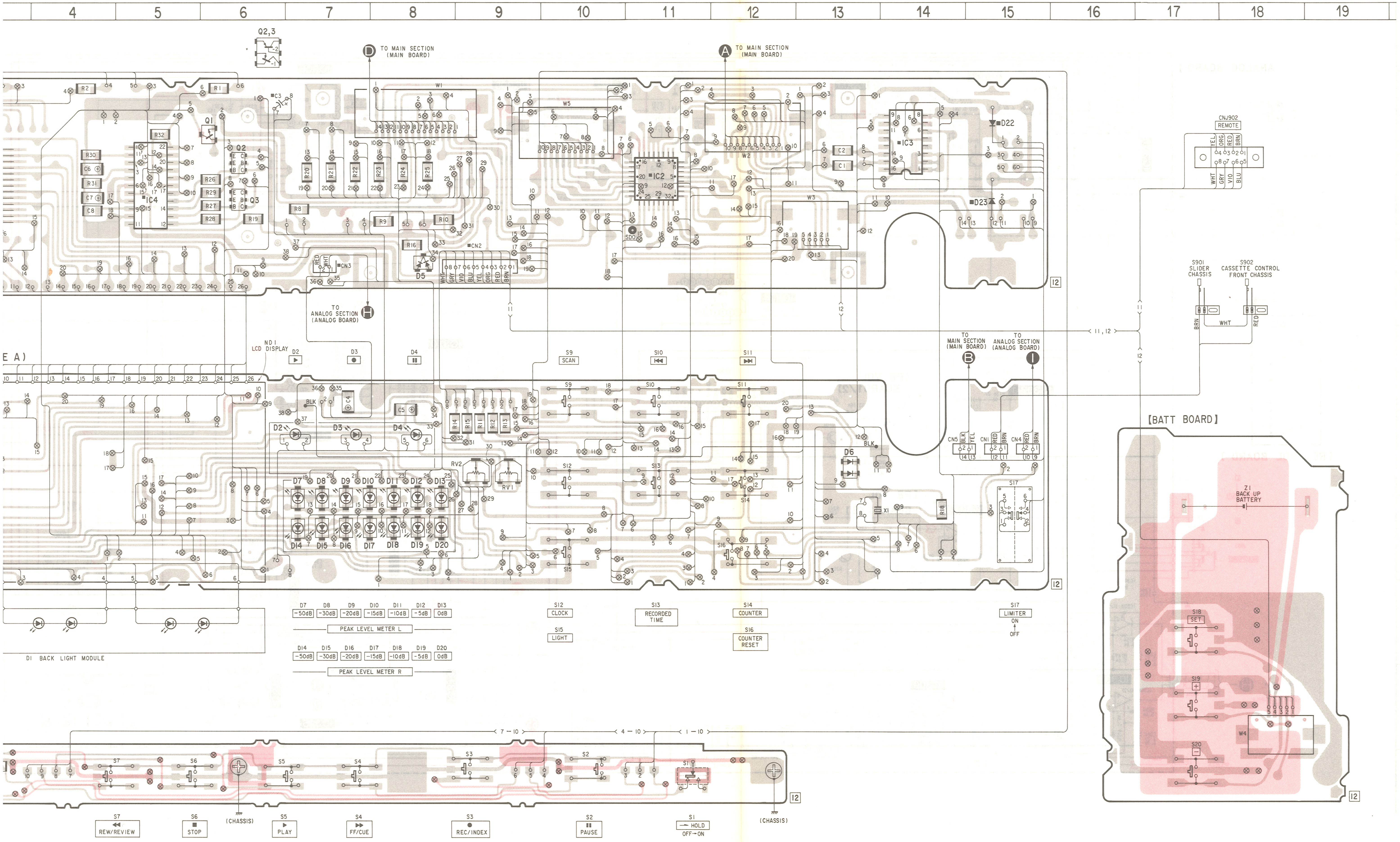
Ref. No.	Location
D1	H-3
D2	E-6
D3	E-7
D4	E-8
D5	C-8
D6	F-13
D7	F-7
D8	F-7
D9	F-7
D10	F-7
D11	F-8
D12	F-8
D13	F-8
D14	G-7
D15	G-7
D16	G-7
D17	G-7
D18	G-8
D19	G-8
D20	G-8
D21	I-3
IC1	B-3
IC2	B-11
IC3	B-14
IC4	C-5
Q1	B-6
Q2	B-6
Q3	C-6

5-7. PRINTED WIRING BOARD—DISPLAY SECTION—

- Refer to page 33 for Circuit Boards Location.
- Refer to page 54 for Semiconductor Lead Layouts.

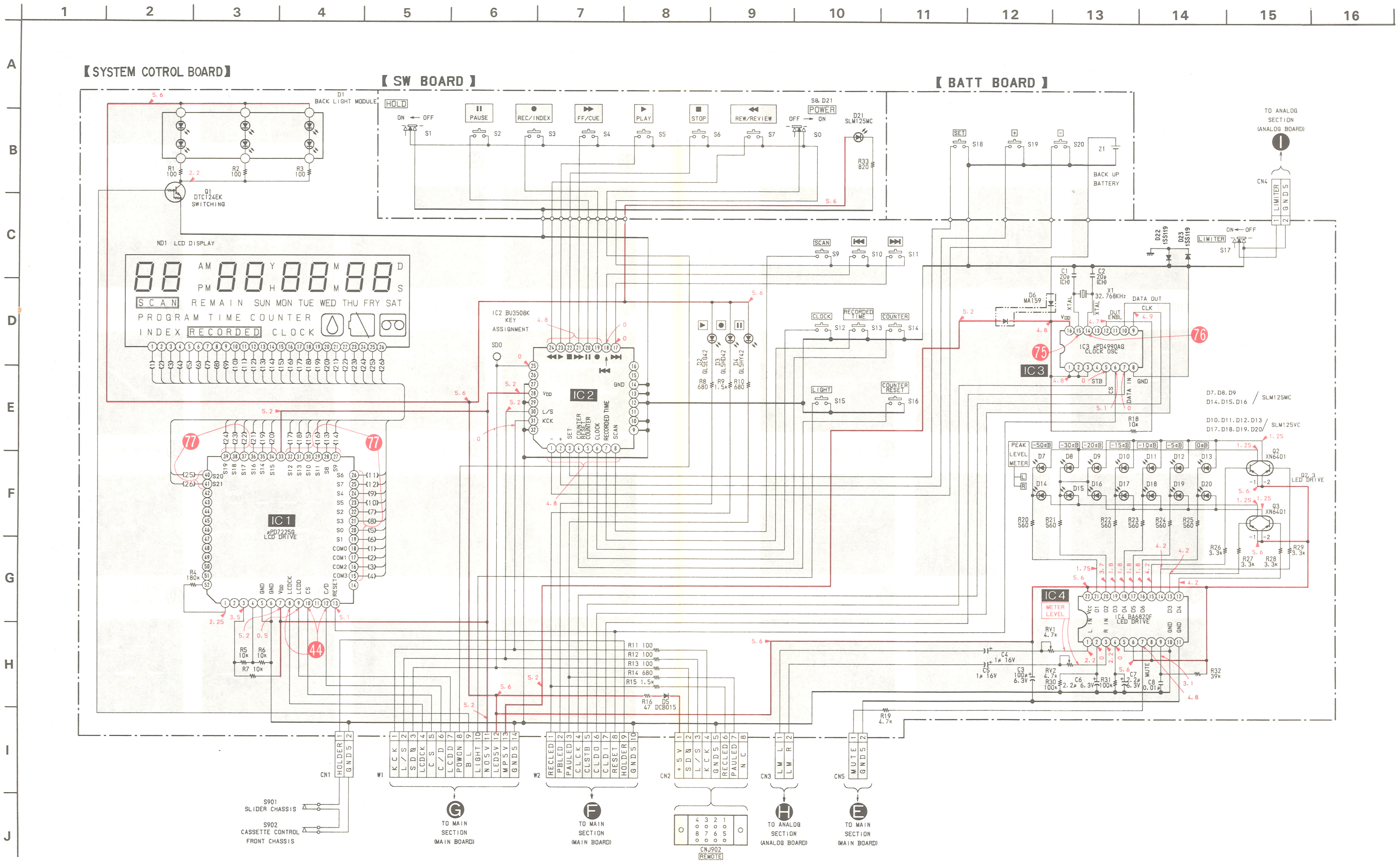

1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
Q2,3
Ⓓ TO MAIN SECTION (MAIN BOARD)
Ⓐ TO MAIN SECTION (MAIN BOARD)
[SYSTEM CONTROL BOARD] (SIDE B)
IC1
IC2
IC4
Q1
Q2
Q3
D5
CN2
CN3
W1
W2
W3
W5
TO ANALOG SECTION (ANALOG BOARD) Ⓗ
ND1 LCD DISPLAY
[SYSTEM CONTROL BOARD] (SIDE A)
D2 ▶
D3 ●
D4 ❚❚
S9 SCAN
S10 ⏮
S11 ⏭
RV1
RV2
D7 -50dB
D8 -30dB
D9 -20dB
D10 -15dB
D11 -10dB
D12 -5dB
D13 0dB
PEAK LEVEL METER L
D14 -50dB
D15 -30dB
D16 -20dB
D17 -15dB
D18 -10dB
D19 -5dB
D20 0dB
PEAK LEVEL METER R
S12 CLOCK
S15 LIGHT
S13 RECORDED TIME
S14 COUNTER
S16 COUNTER RESET
D1 BACK LIGHT MODULE
[SW BOARD]
D21
R33
OFF → ON
S8, D21 POWER
S7 ◀◀ REW/REVIEW
S6 ■ STOP
(CHASSIS)
S5 ▶ PLAY
S4 ▶▶ FF/CUE
S3 ● REC/INDEX
S2 ❚❚ PAUSE
S1 HOLD OFF→ON
(CHASSIS)
12

- Refer to page 33 for Circuit Boards Location.
- Refer to page 54 for Semiconductor Lead Layouts.

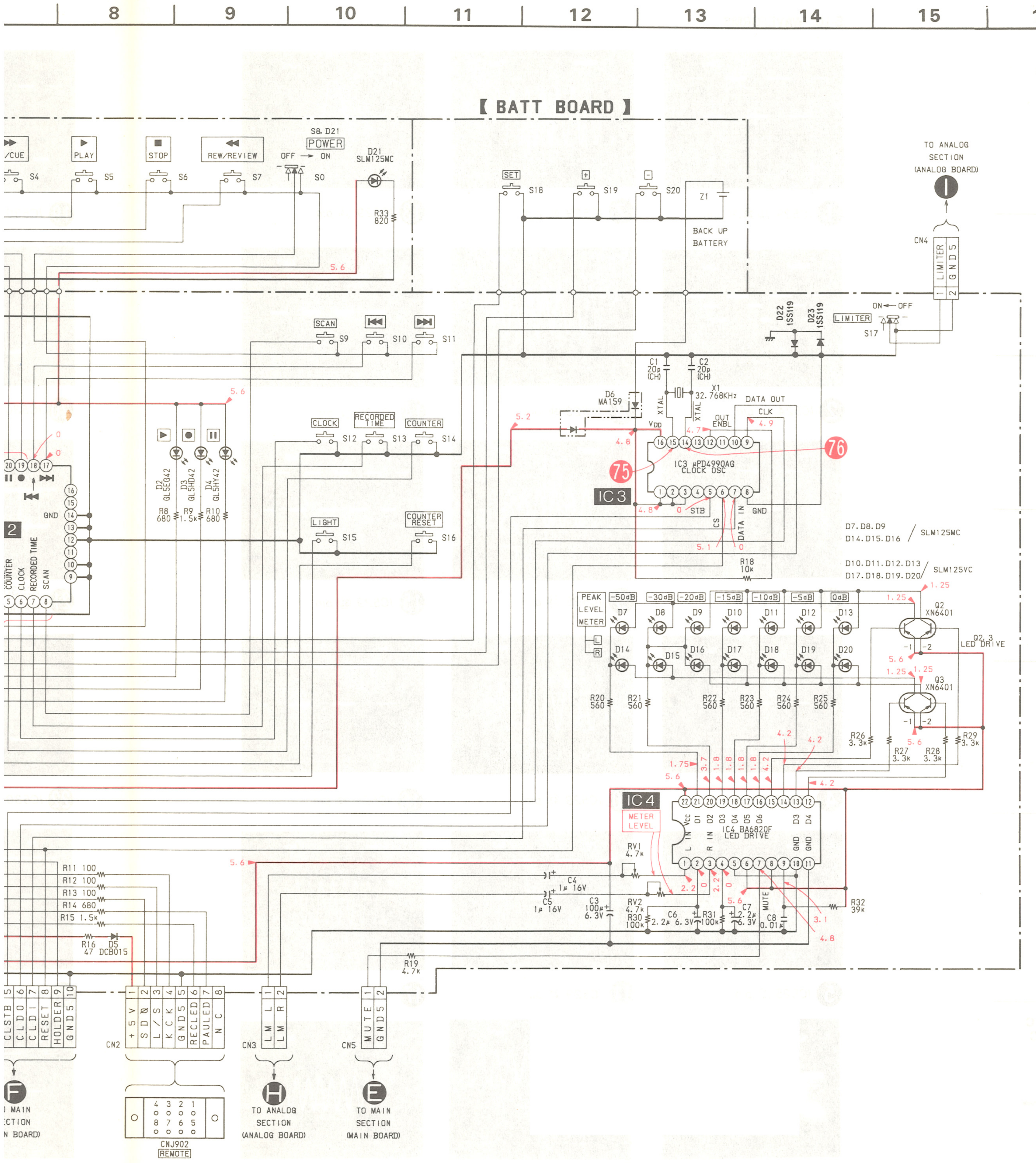

4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
Q2,3
Ⓓ TO MAIN SECTION (MAIN BOARD)
Ⓐ TO MAIN SECTION (MAIN BOARD)
W1
W2
W3
W4
W5
IC2
IC3
IC4
Q1
Q2
Q3
D22
D23
CN2
CN3
D5
TO ANALOG SECTION (ANALOG BOARD) Ⓗ
ND1 LCD DISPLAY
D2
D3
D4
S9 SCAN
S10
S11
TO MAIN SECTION (MAIN BOARD) Ⓑ
TO ANALOG SECTION (ANALOG BOARD) Ⓘ
CNJ902 REMOTE
YEL
ORG
RED
BRN
WHT
GRY
VIO
BLU
S901 SLIDER CHASSIS
S902 CASSETTE CONTROL FRONT CHASSIS
11, 12
CN5
CN1
CN4
BLK
D6
X1
R18
S17
RV1
RV2
D7
D8
D9
D10
D11
D12
D13
D14
D15
D16
D17
D18
D19
D20
S12
S13
S14
S15
S16
[BATT BOARD]
Z1 BACK UP BATTERY
S18 SET
S19 +
S20 −
D1 BACK LIGHT MODULE
D7 −50dB
D8 −30dB
D9 −20dB
D10 −15dB
D11 −10dB
D12 −5dB
D13 0dB
PEAK LEVEL METER L
D14 −50dB
D15 −30dB
D16 −20dB
D17 −15dB
D18 −10dB
D19 −5dB
D20 0dB
PEAK LEVEL METER R
S12 CLOCK
S15 LIGHT
S13 RECORDED TIME
S14 COUNTER
S16 COUNTER RESET
S17 LIMITER ON ↑ OFF
7 − 10
4 − 10
1 − 10
S7 ◀◀ REW/REVIEW
S6 ■ STOP
(CHASSIS)
S5 ▶ PLAY
S4 ▶▶ FF/CUE
S3 ● REC/INDEX
S2 ❚❚ PAUSE
S1 ⟶ HOLD OFF→ON
(CHASSIS)
12

5-8. SCHEMATIC DIAGRAM—DISPLAY SECTION—

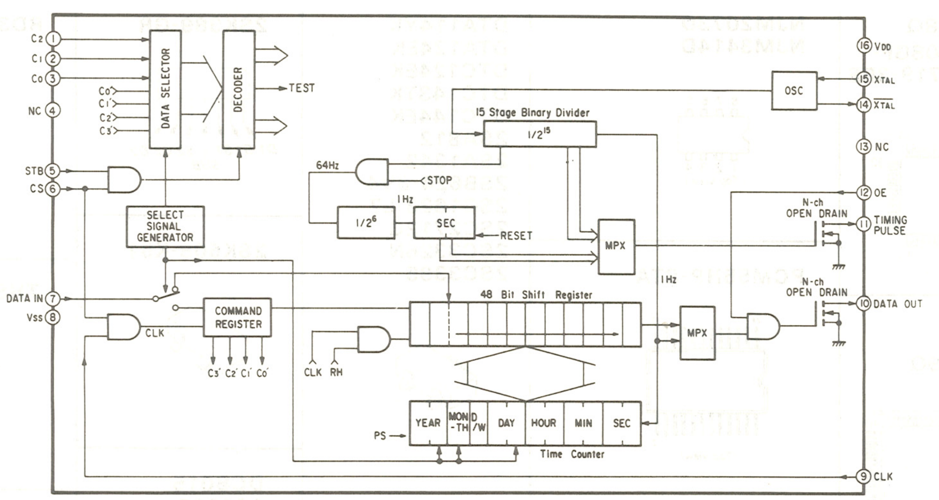
• Refer to page 55 for Waveforms.



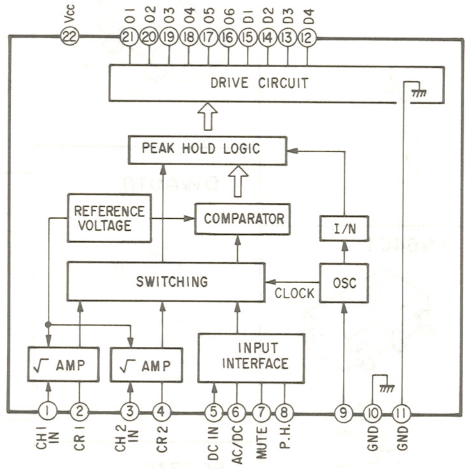
【SYSTEM COTROL BOARD】
【SW BOARD】
【BATT BOARD】
BACK LIGHT MODULE
Q1 DTC124EK SWITCHING
ND1 LCD DISPLAY
SCAN REMAIN SUN MON TUE WED THU FRY SAT
PROGRAM TIME COUNTER
INDEX RECORDED CLOCK
IC1 μPD7225G LCD DRIVE
IC2 BU3508K KEY ASSIGNMENT
IC3 μPD4990AG CLOCK OSC
IC4 BA6820F LED DRIVE
HOLD
PAUSE
REC/INDEX
FF/CUE
PLAY
STOP
REW/REVIEW
POWER
D21 SLM125MC
SET
BACK UP BATTERY
TO ANALOG SECTION (ANALOG BOARD)
CN4
LIMITER
D22 1SS119
D23 1SS119
SCAN
CLOCK
RECORDED TIME
COUNTER
LIGHT
COUNTER RESET
X1 32.768kHz
DATA OUT
CLK
PEAK LEVEL METER
-50dB -30dB -20dB -15dB -10dB -5dB 0dB
D7. D8. D9 D14. D15. D16 / SLM125MC
D10. D11. D12. D13 D17. D18. D19. D20 / SLM125VC
Q2 XN6401
Q2, 3 LED DRIVE
Q3 XN6401
METER LEVEL
RV1 4.7k
RV2 4.7k
D5 DCB015
CN1
HOLDER
GND5
W1
KCK L/S SDQ LCDCK CS C/D LCDD POWON BL LIGHT NO5V LED5V MP5V GND5
W2
RECLED PBLED PAULED CLCK CLSTB CLDO CLDI RESET HOLDER GND5
CN2
+5V SDQ L/S KCK GND5 RECLED PAULED NC
CN3
LM RM
CN5
MUTE GND5
S901 SLIDER CHASSIS
S902 CASSETTE CONTROL FRONT CHASSIS
G TO MAIN SECTION (MAIN BOARD)
F TO MAIN SECTION (MAIN BOARD)
CNJ902 REMOTE
H TO ANALOG SECTION (ANALOG BOARD)
E TO MAIN SECTION (MAIN BOARD)
75
76
77
44


8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
A
B
C
D
E
F
G
H
I
J
【 BATT BOARD 】
FF/CUE
PLAY
STOP
REW/REVIEW
S4
S5
S6
S7
S8, D21
POWER
OFF → ON
S0
D21 SLM125MC
R33 820
SET
S18
+
S19
−
S20
Z1
BACK UP BATTERY
TO ANALOG SECTION (ANALOG BOARD)
Ⓘ
CN4
LIMITER
GND5
ON ← OFF
LIMITER
S17
D22 1SS119
D23 1SS119
SCAN
S9
S10
S11
C1 20p (CH)
C2 20p (CH)
X1 32.768KHz
XTAL
DATA OUT
CLK
OUT ENBL
VDD
D6 MA159
CLOCK
S12
RECORDED TIME
S13
COUNTER
S14
IC3 μPD4990AG CLOCK OSC
IC3
75
76
STB
CS
DATA IN
GND
LIGHT
S15
COUNTER RESET
S16
D2 GL5EG42
D3 GL5HD42
D4 GL5HY42
R8 680
R9 1.5k
R10 680
GND
COUNTER
CLOCK
RECORDED TIME
SCAN
D7, D8, D9 D14, D15, D16 / SLM125MC
D10, D11, D12, D13 D17, D18, D19, D20 / SLM125VC
R18 10k
PEAK LEVEL METER
−50dB
−30dB
−20dB
−15dB
−10dB
−5dB
0dB
Q2 XN6401
Q3 XN6401
Q2, 3 LED DRIVE
R20 560
R21 560
R22 560
R23 560
R24 560
R25 560
R26 3.3k
R27 3.3k
R28 3.3k
R29 3.3k
IC4
METER LEVEL
IC4 BA6820F LED DRIVE
RV1 4.7k
RV2 4.7k
C4 1μ 16V
C5 1μ 16V
C3 100μ 6.3V
R30 100k
C6 2.2μ 6.3V
R31 100k
C7 2.2μ 6.3V
C8 0.01
R32 39k
R11 100
R12 100
R13 100
R14 680
R15 1.5k
R16 47
D5 DCB015
R19 4.7k
CLSTB
CLDO
CLDI
RESET
HOLDER
GND5
CN2
+5V
SDN
L/S
KCK
GND5
RECLED
PAULED
NC
CN3
LM L
LM R
CN5
MUTE
GND5
Ⓕ
TO MAIN SECTION (MAIN BOARD)
Ⓗ
TO ANALOG SECTION (ANALOG BOARD)
Ⓔ
TO MAIN SECTION (MAIN BOARD)
CNJ902 REMOTE
5.6
5.2
4.6
4.7
4.9
4.8
5.1
1.25
4.2
1.75
3.1

IC3 μPD4990AG


C2
C1
C0
NC
STB
CS
DATA IN
Vss
DATA SELECTOR
DECODER
TEST
SELECT SIGNAL GENERATOR
COMMAND REGISTER
CLK
64Hz
STOP
1Hz
1/2⁶
SEC
RESET
15 Stage Binary Divider
1/2¹⁵
OSC
MPX
48 Bit Shift Register
MPX
CLK
RH
YEAR
MONTH/W
DAY
HOUR
MIN
SEC
Time Counter
PS
N-ch OPEN DRAIN
VDD
XTAL
XTAL
NC
OE
TIMING PULSE
DATA OUT
CLK

IC4 BA6820F


Vcc
O1
O2
O3
O4
O5
O6
D1
D2
D3
D4
DRIVE CIRCUIT
PEAK HOLD LOGIC
REFERENCE VOLTAGE
COMPARATOR
I/N
SWITCHING
CLOCK
OSC
√ AMP
√ AMP
INPUT INTERFACE
CH1 IN
CR1
CH2 IN
CR2
DC IN
AC/DC
MUTE
P.H.
GND
GND

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.

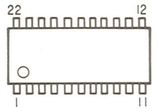
- ▬ : B+ Line
- ☐ : adjustment for repair.
- Power voltage is dc 6.3V and fed with regulated dc power supply from external power voltage jack.
- Voltage and waveforms are cassette tape to insert with respect to ground under no-signal conditions.
  no mark : STOP mode
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.

- Switch

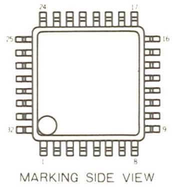
Ref. No.	Switch	Positiom
S1	HOLD	OFF
S2	PAUSE ❚❚	OFF
S3	REC/INDEX ●	OFF
S4	FF/CUE ▶▶	OFF
S5	PLAY ▶	OFF
S6	STOP ■	OFF
S7	REW/REVIEW ◀◀	OFF
S8	POWER	OFF
S9	SCAN	OFF
S10	⏮	OFF
S11	⏭	OFF
S12	CLOCK	OFF
S13	RECORDED TIME	OFF
S14	COUNTER	OFF
S15	LIGHT	OFF
S16	COUNTER RESET	OFF
S17	LIMITER	OFF
S18	SET	OFF
S19	+	OFF
S20	−	OFF
S901	SLIDER CHASSIS	OFF
S902	CASSETTE CONTROL FRONT CHASSIS	OFF

5-9. SEMICONDUCTOR LEAD LAYOUTS

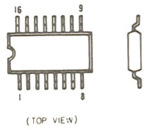
BA6820F



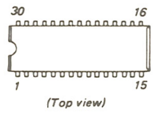
BU3508K


24
17
25
16
32
9
1
8
MARKING SIDE VIEW

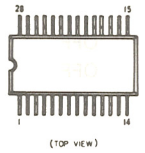
CX20084
MC14052BF
MC14053BF
MC14538BF
μPD6335G
μPD74HC163G


16
9
1
8
(TOP VIEW)

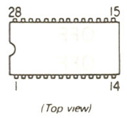
CX20174


30
16
1
15
(Top view)

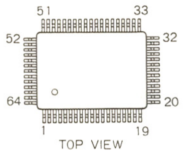
CXA1046M
CXK5864M-10L
SM5806ST


28
15
1
14
(TOP VIEW)

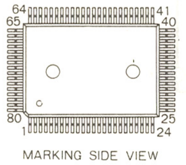
CXA1144S


28
15
1
14
(Top view)

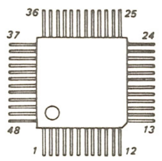
CXD1008Q
μPD75108GF-719-3BE


51
33
52
32
64
20
1
19
TOP VIEW

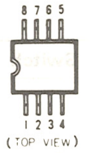
CXD1009Q


64
41
65
40
80
25
1
24
MARKING SIDE VIEW

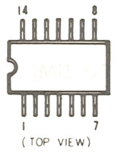
CXD1052Q-Z


36
25
37
24
48
13
1
12

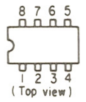
LF353M-FL63
LM358M
LM393M
LM833M-FL63
MB3763PF
MC34063ML
TLC272PS
μPC358G2


8 7 6 5
1 2 3 4
(TOP VIEW)

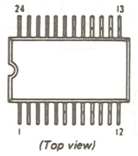
LM324M
MC4044ML
MC74HC86F
SN74LS628NS
TC74HC04F


14
8
1
7
(TOP VIEW)

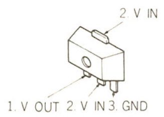
NJM2073D
NJM3414D


8 7 6 5
1 2 3 4
(Top view)

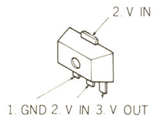
PCM55HP-STA


24
13
1
12
(Top view)

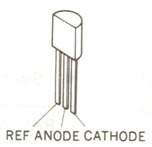
S-8054HN-CB


2. V IN
1. V OUT 2. V IN 3. GND

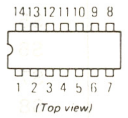
S-81250HG-RDS


2. V IN
1. GND 2. V IN 3. V OUT

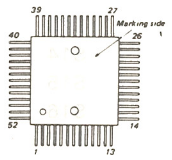
TL431CLPB


REF ANODE CATHODE

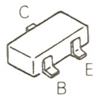
μPD4990AG


14 13 12 11 10 9 8
1 2 3 4 5 6 7
(Top view)

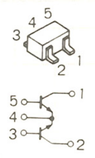
μPD7225G


39
27
Marking side
26
40
52
14
1
13

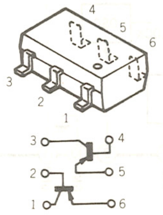
DTA114YK
DTA124EK
DTC124EK
DTC143TK
DTC144EK
2SA812
2SA1342
2SB624-BV4
2SC1623-L7
2SC2712G
2SC3326N
2SC3395



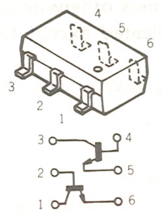
FMW2


5
4
3
2
1
5
4
3
1
2

XN6401


4
5
6
3
2
1
3
4
2
5
1
6

XN6501


4
5
6
3
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1
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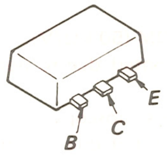
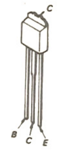
4
2
5
1
6

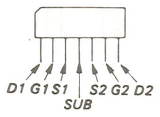
2SB798
2SD999



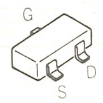
2SB962



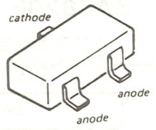
2SK389-GR


D1 G1 S1
SUB
S2 G2 D2

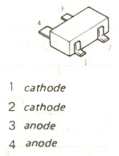
2SK508-K51



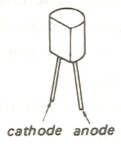
DCB015
1S2837


cathode
anode
anode

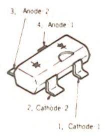
DWA010


3
4
2
1
1 cathode
2 cathode
3 anode
4 anode

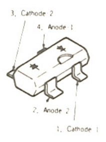
FC53M


cathode
anode

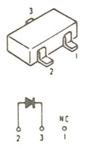
MA159


3. Anode 2
4. Anode 1
2. Cathode 2
1. Cathode 1

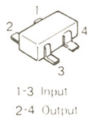
MA160


3. Cathode 2
4. Anode 1
2. Anode 2
1. Cathode 1

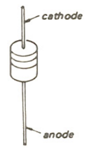
RD3.3M-B2



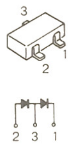
THS105


1
2
4
3
1-3 Input
2-4 Output

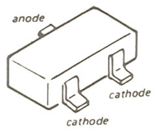
1SS119


cathode
anode

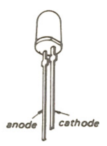
1SS123



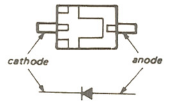
1S2835


anode
cathode
cathode

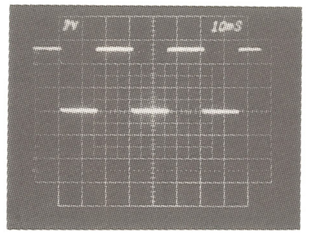
GL-5EG42
GL-5HD42
GL-5HY42

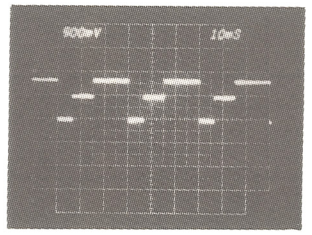

anode
cathode

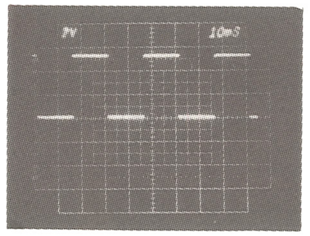
SLM-125MC
SLM-125VC

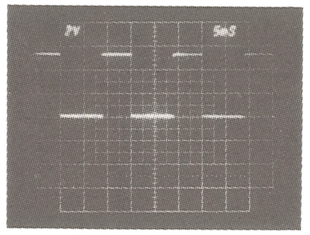

cathode
anode

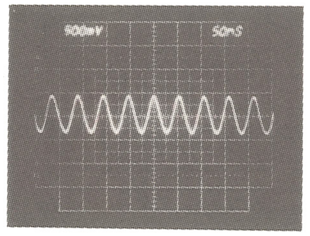
5-10. WAVEFORMS

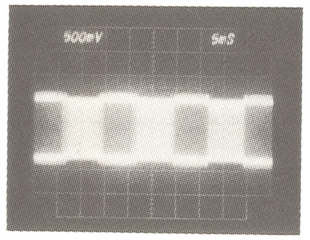

❶ IC529 ㉑,㉒,㉖ pin

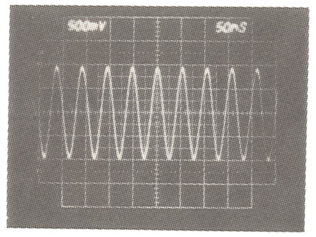

❷ IC524 ⑬ pin

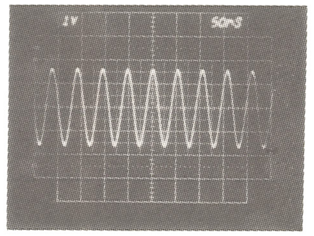

❸ IC524 ⑨ pin

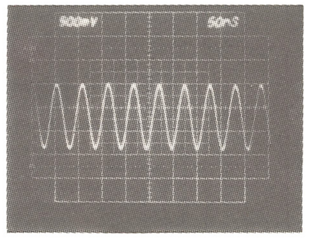

❹ IC502 ⑱ pin

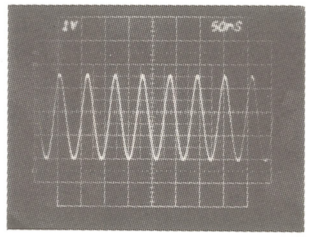

❺ IC525 ① pin

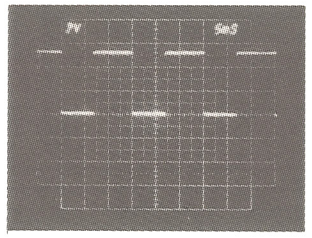

❻ IC529 ㊻ pin

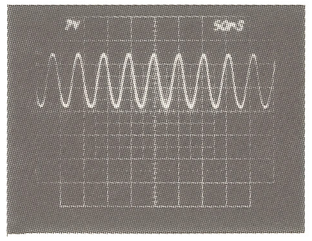

❼ IC529 ㉛ pin

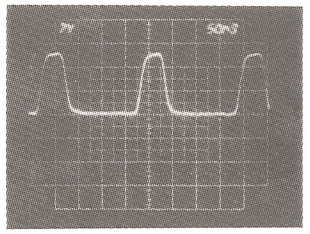

❽ IC529 ㊿ pin

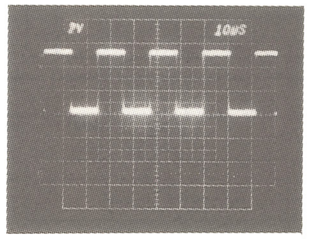

❾ IC529 ㊹ pin

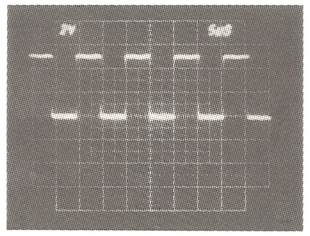

❿ IC529 ㊸ pin

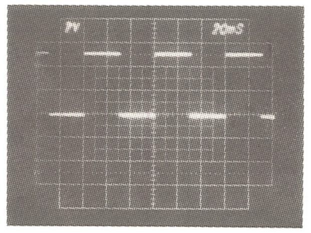

⓫ IC529 ㉒ pin

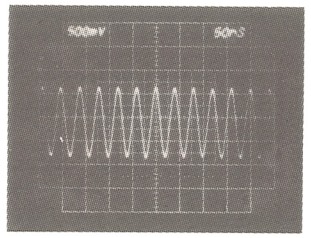

⓬ IC529 ⑬ pin

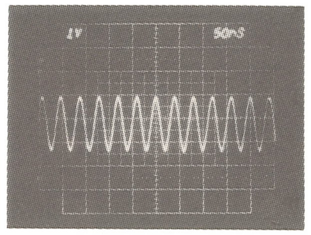

⓭ IC529 ⑭ pin

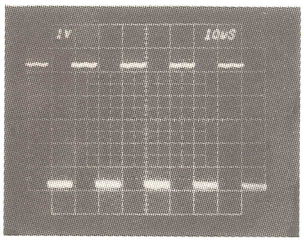

⓮ IC529 ㉚ pin


⓯ IC529 ㉛ pin

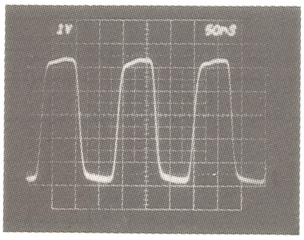

⓰ IC529 ㉜ pin


⓱ IC530 ⑪ pin

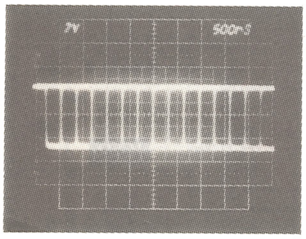

⓲ IC530 ⑫ pin



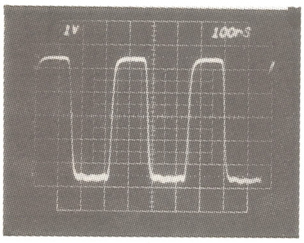
⑲ IC530 ⑰ pin



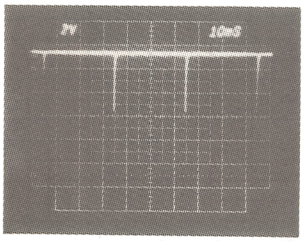
⑳ IC530 ⑲ pin



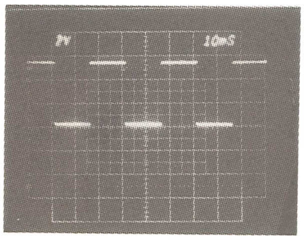
㉑ IC530 ⑳ pin
(Difficult to data)



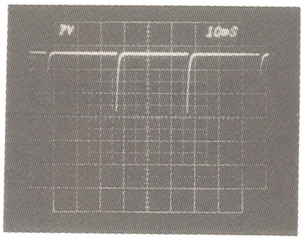
㉒ IC530 ㉓, ㉔ pin



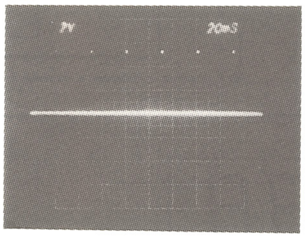
㉓ IC501 ⑭ pin



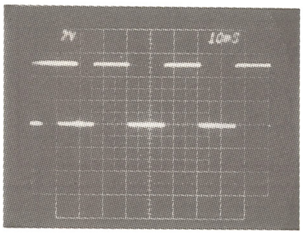
㉔ IC502 ㊺ pin



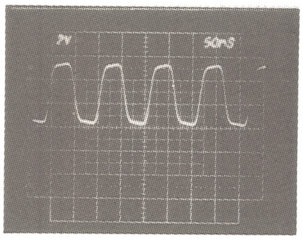
㉕ IC501 ② pin



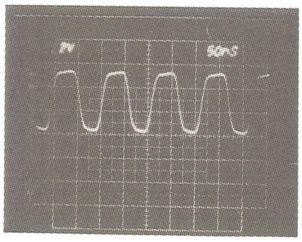
㉖ IC502 ㊹ pin



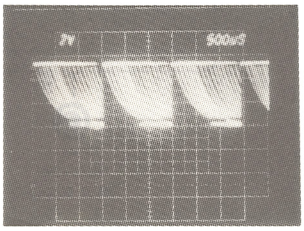
㉗ IC502 ㊶ pin



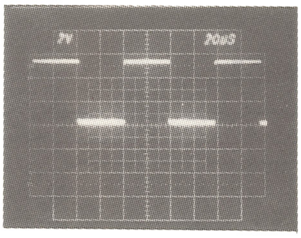
㉘ IC502 ㊽ pin



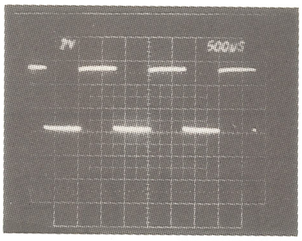
㉙ IC502 ① pin



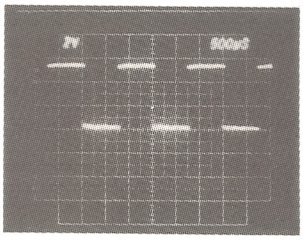
㉚ IC502 ④ pin



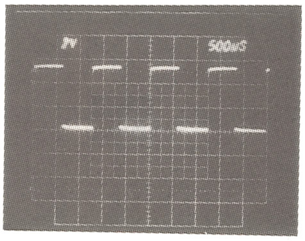
㉛ IC502 ② pin



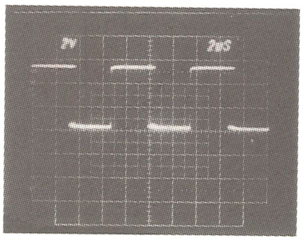
㉜ IC502 ⑦ pin



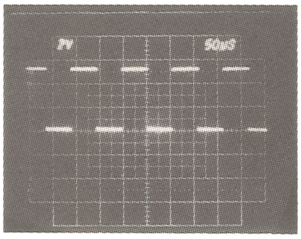
㉝ IC502 ⑨ pin



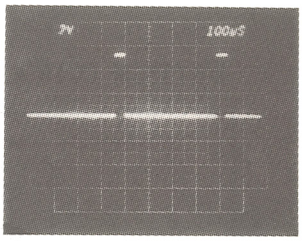
㉞ IC502 ⑪ pin



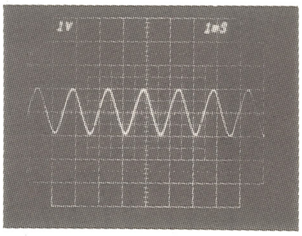
㉟ IC502 ⑬ pin



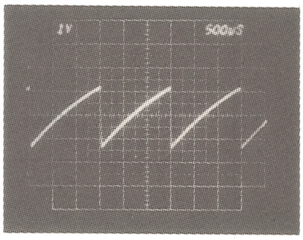
㊱ IC502 ⑭ pin



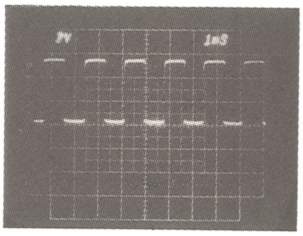
㊲ IC502 ⑮ pin



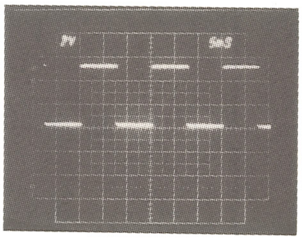
㊳ IC522 ② pin



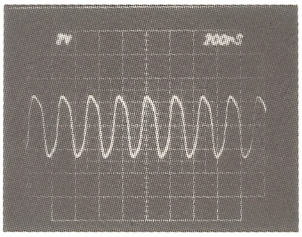
㊴ IC516 ⑭ pin



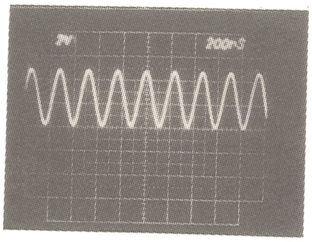
㊵ IC507 ㉚ pin
(FF/REW mode)



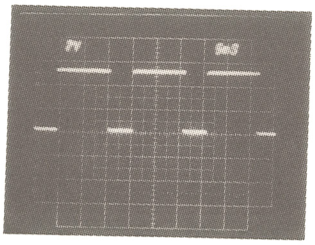
㊶ IC507 ㉘ pin



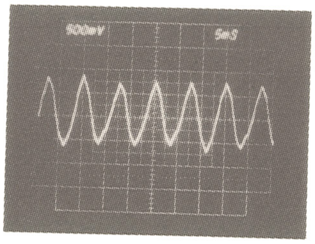
㊷ IC507 ⑧ pin



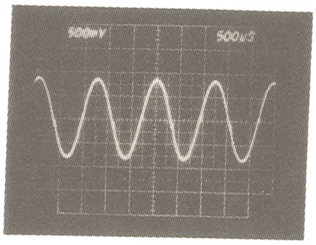
㊸ IC507 ⑨ pin



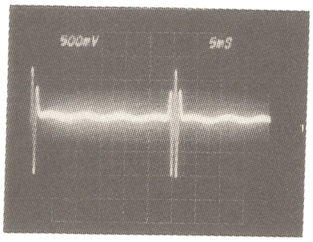
㊹ IC507 ⑮ pin



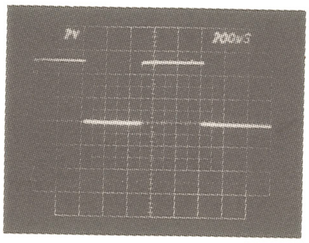
㊺ IC518 ⑯ pin



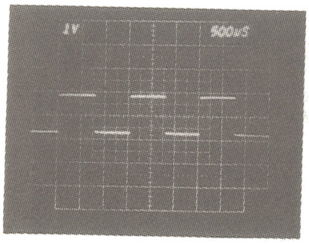
㊻ IC519 ① pin



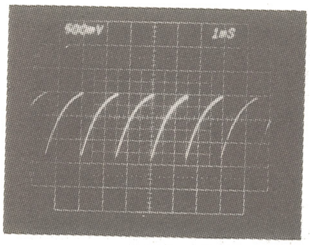
㊼ IC519 ⑭ pin
(Durm PG signal)



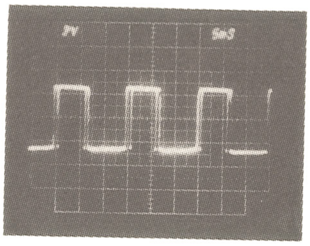
㊽ IC520 ⑦ pin



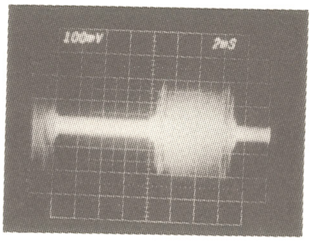
㊾ IC517 ③ pin



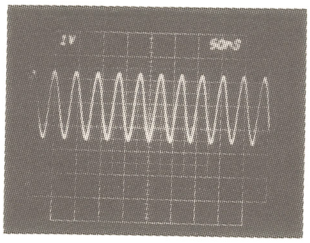
㊿ IC517 ④ pin



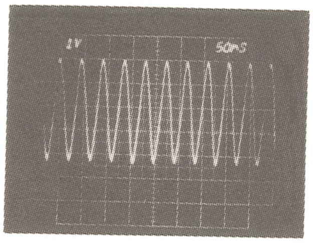
(51) IC515 ㉘ pin



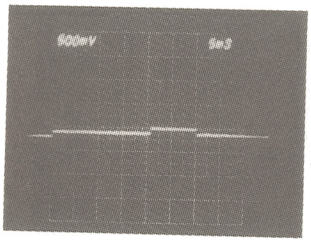
(52) IC515 ① pin (Settled REC
tape playback mode)



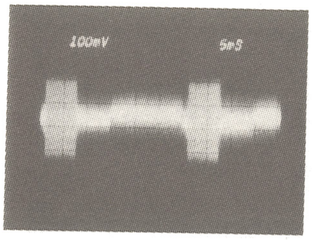
(53) IC530 ⑧ pin
(TEST MODE 1)



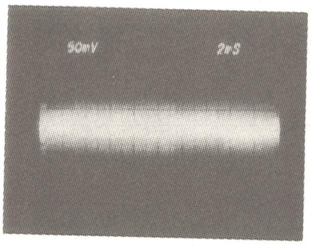
(54) IC530 ⑨ pin
(TEST MODE 1)



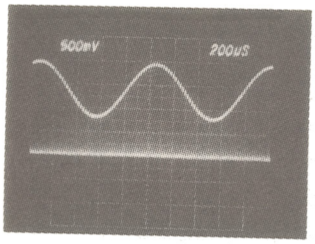
(55) IC515 ⑧ pin



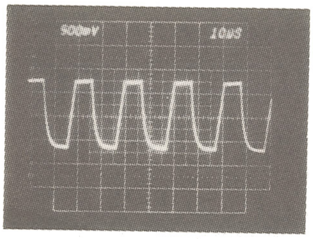
(56) TP520



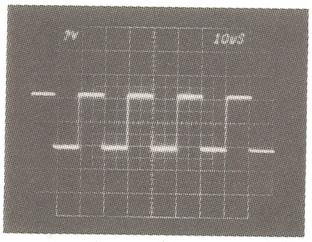
(57) Head output waveform



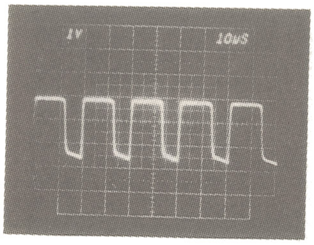
(58) IC101 ① pin (REC mode)



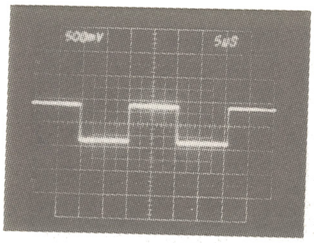
(58) IC101 ① pin, IC201 ① pin



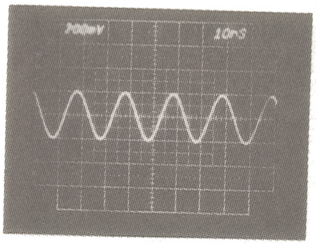
(59) Q102, 202 Gate output
waveform



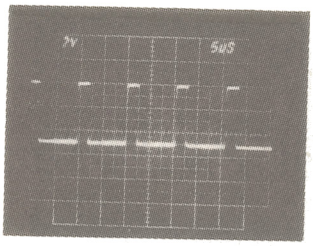
(60) IC306 ⑦, ⑩ pin



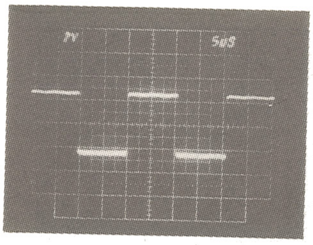
(61) IC306 ⑫ pin



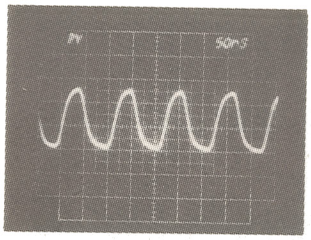
(62) IC306 ㉑ pin



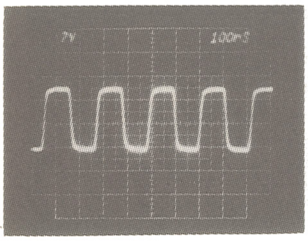
(63) IC311 ⑮ pin



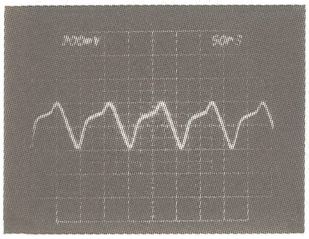
(64) IC311 ⑧ pin



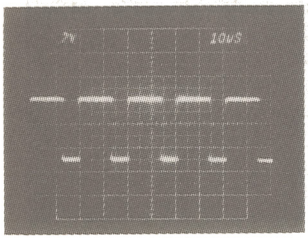
(65) IC314 ② pin



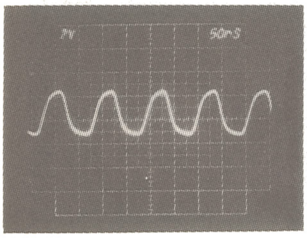
66 IC314 ⑮ pin



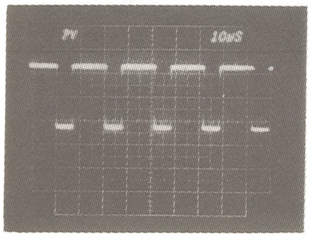
67 IC313 ④ pin



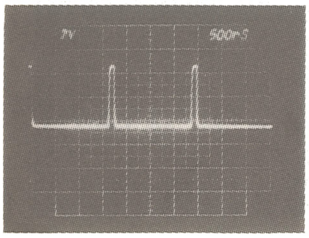
68 IC312 ③ pin



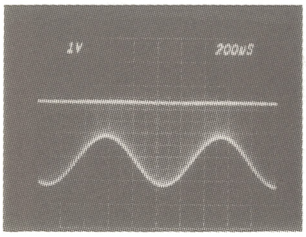
69 IC316 ⑪ pin



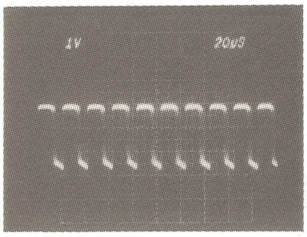
70 IC315 ⑪ pin



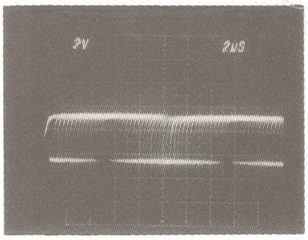
71 IC315 ⑩ pin



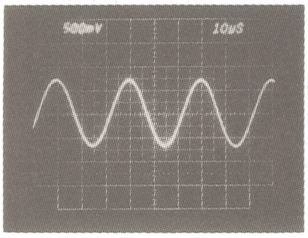
72 IC101 ⑦ pin (REC mode)
Sampling holded waveform.



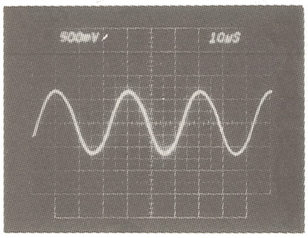
73 IC305 ① pin (REC mode)
Input to A/D CONNECTER



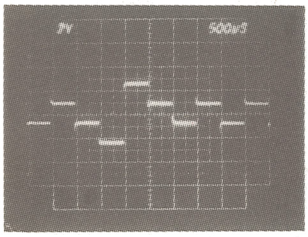
74 IC306 ㉗ pin (REC mode)
This data was changed Analog/Digital.



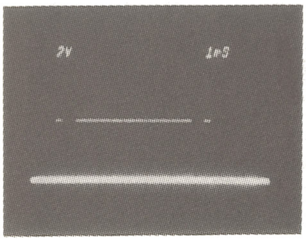
75 IC3 ⑮ pin



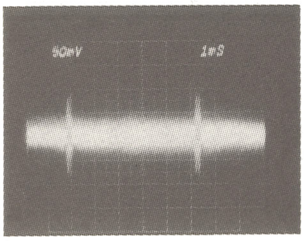
76 IC3 ⑭ pin



77 IC1 SEG WAVE
(Display is all 8)



78 CRC TP503



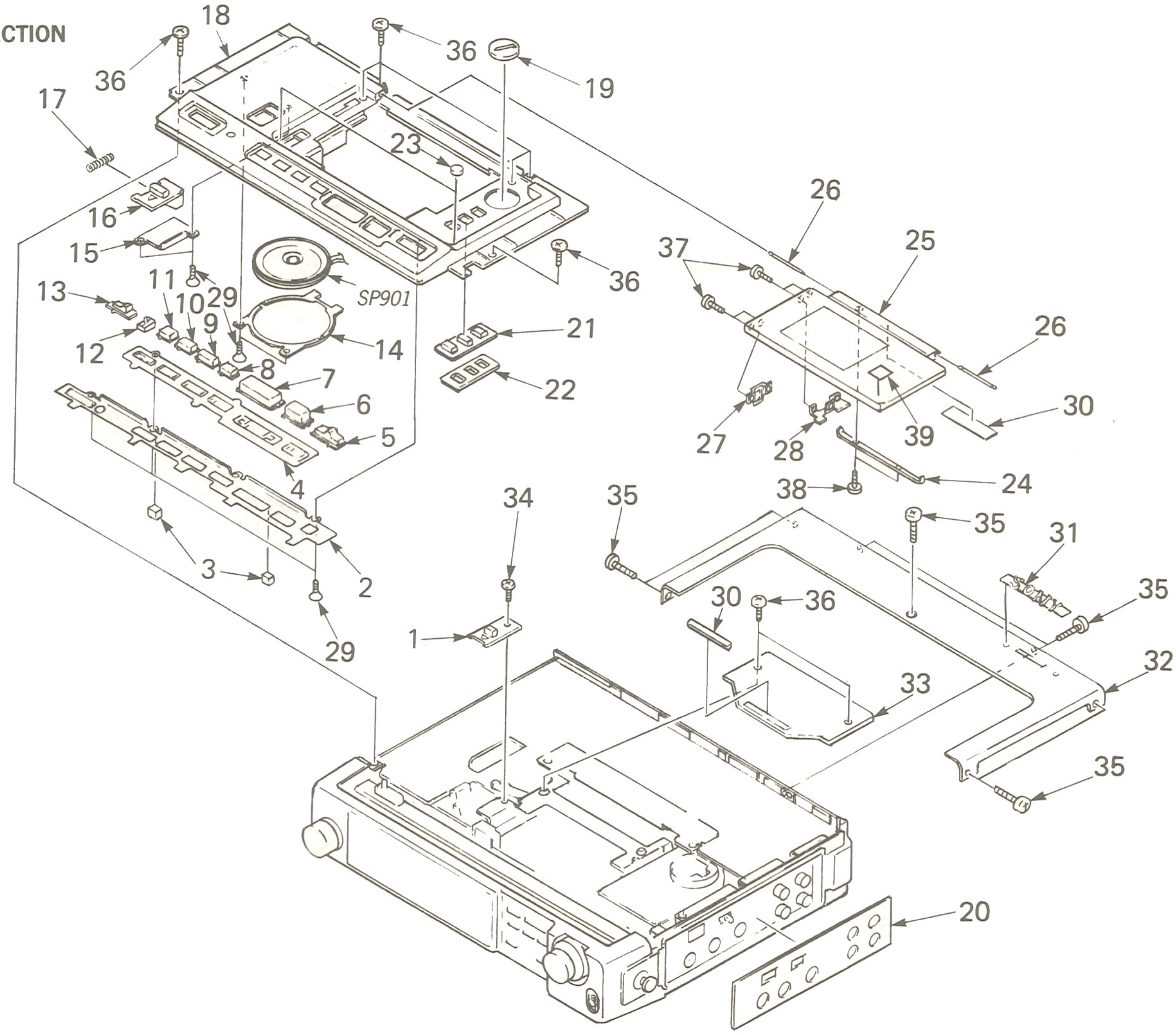
79 IC515 ⑤ pin
(Draw out to pilot pulse)

SECTION 6
EXPLODED VIEWS

NOTE:

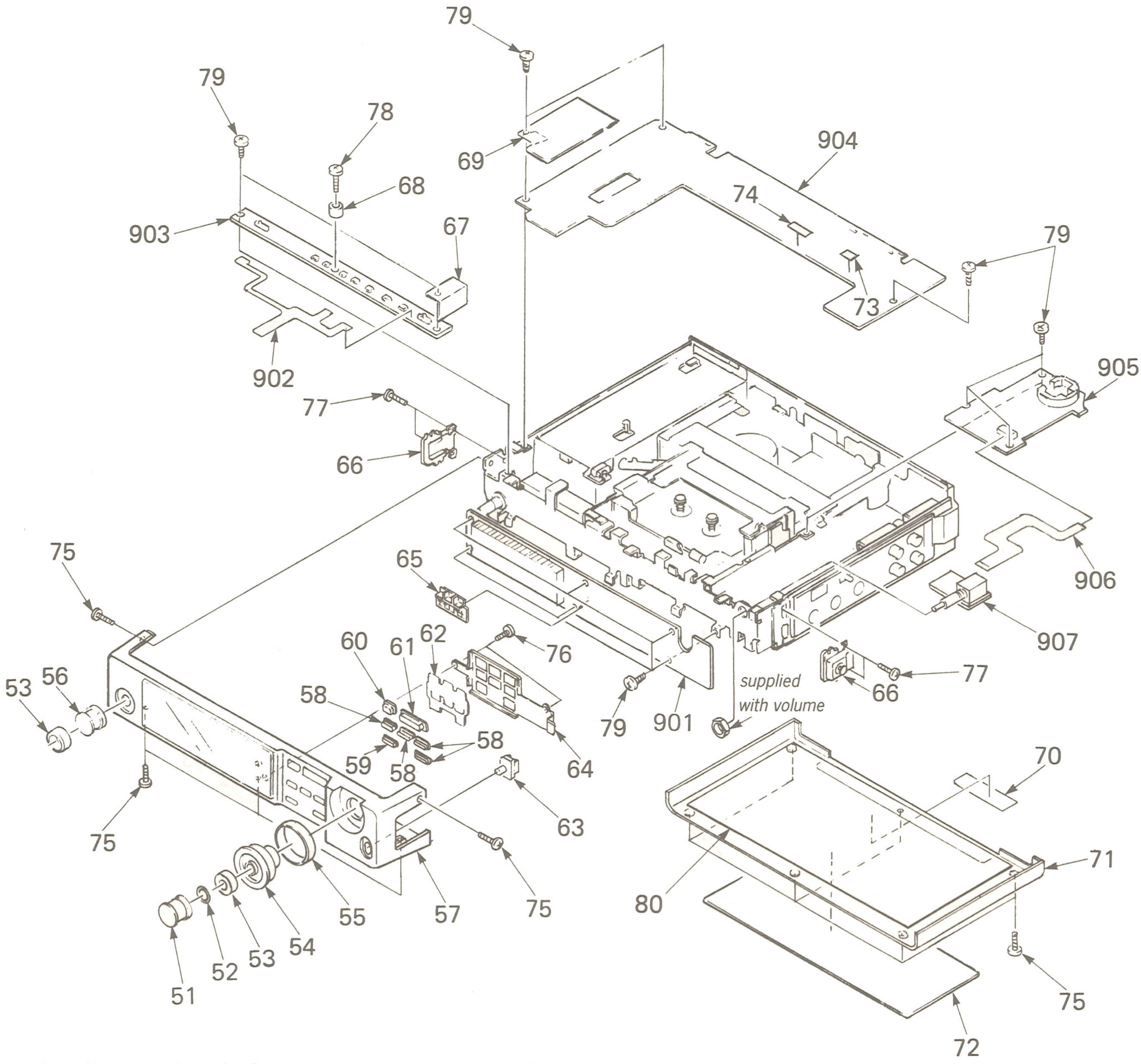
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ ↑
  Cabinet's Color Parts Color

6-1. CABINET SECTION



No.	Part No.	Description	Remarks
1	3-344-977-01	KNOB (EJECT)	
2	*3-345-014-01	BRACKET (CONTROL BUTTON SPRING)	
3	3-533-310-01	CUSHION, CASSETTE LID	
4	3-344-947-01	SPRING	
5	3-344-940-01	KNOB (HOLD)	
6	3-344-941-01	BUTTON (PAUSE)	
7	3-344-942-01	BUTTON (REC)	
8	3-344-943-01	BUTTON (FF)	
9	3-344-944-01	BUTTON (PLAY)	
10	3-344-945-01	BUTTON (STOP)	
11	3-344-946-01	BUTTON (REW)	
12	3-344-955-01	PLATE (POWER LED), LIGHT GUIDE	
13	3-344-939-01	KNOB (POWER)	
14	*3-344-951-01	BRACKET (SP)	
15	*3-344-949-01	BRACKET (CASSETE LID OPEN KNOB)	
16	3-344-948-01	KNOB (CASSETTE LID OPEN)	
17	3-344-950-01	SPRING, COMPRESSION	
18	X-3344-918-1	CABINET (UPPER) ASSY	
19	3-344-954-01	LID, BATTERY CASE	
20	3-344-905-01	PLATE, INDICATION, JACK	
21	3-344-952-01	BUTTON (TIME SET)	
22	*3-344-953-01	BRACKET (TIME SET KEY)	
23	3-331-603-01	FOOT	
24	3-344-958-01	PLATE, FIXED, CASSETTE SHAFT	
25	X-3344-911-1	LID ASSY, CASSETTE	
26	3-344-957-01	SHAFT (CASSETTE LID)	
27	*3-344-959-01	PLATE, LOCK, CASSETTE LID	
28	*X-3344-906-1	PLATE ASSY, FULCRUM, OPEN ARM	
29	3-318-382-31	SCREW (1.7X3), TAPPING	
30	3-344-992-01	SHEET, REAR, CASSETTE LID	
31	3-704-176-01	EMBLEM (NO.6), SONY	
32	3-345-011-01	PANEL, UPPER	
33	3-344-982-01	PLATE, ORNAMENTAL	
34	7-627-553-18	SCREW, PRECISION +P 2X2	
35	7-627-553-68	SCREW, PRECISION +P 2X6	
36	7-621-772-10	SCREW +B 2X4	
37	3-704-246-32	SCREW (P1.4X2.5)	
38	7-627-551-28	SCREW, PRECISION +P 1.4X2.5	
39	3-703-708-41	STICKER, SONY SYMBOL (18)	
SP901	1-503-866-11	SPEAKER	

6-2. FRONT PANEL SECTION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supplied
with volume
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901
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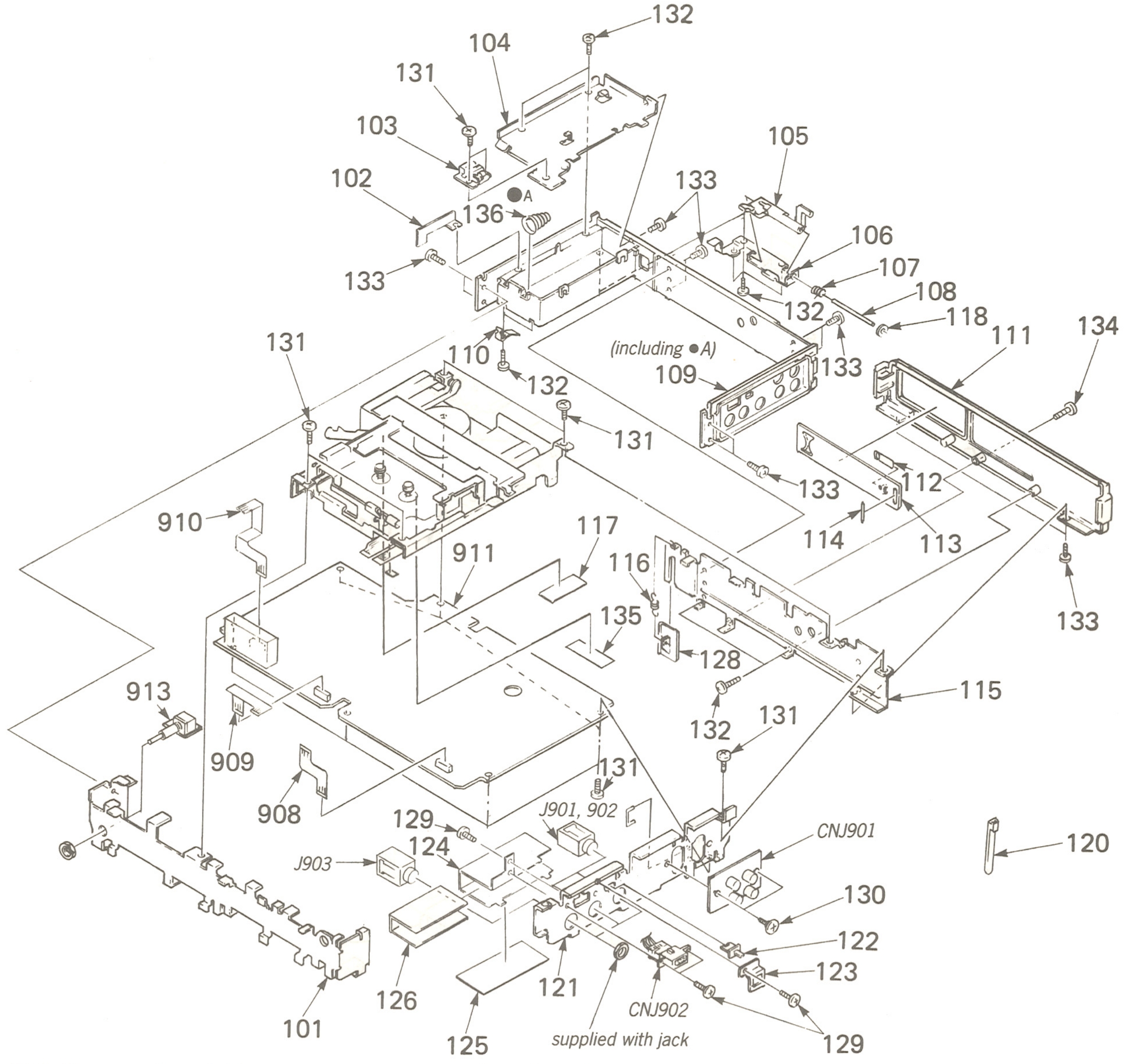
No.	Part No.	Description	Remarks
51	3-344-935-11	KNOB (REC VOL RIGHT)	
52	3-344-904-01	RING, O	
53	3-344-937-01	RING (RIGHT), REC VOL	
54	X-3344-904-1	KNOB (REC VOL LEFT) ASSY	
55	3-344-936-01	RING (LEFT), REC VOL	
56	3-344-935-01	KNOB (REC VOL RIGHT)	
57	X-3344-914-1	CABINET (FRONT) ASSY	
58	3-344-931-01	BUTTON (COUNTER RESET)	
59	3-344-932-01	BUTTON (LCD LIGHT)	
60	3-344-929-01	BUTTON (SCAN)	
61	3-344-930-01	BUTTON (SERCH)	
62	3-345-013-01	SPRING	
63	3-344-933-01	KNOB (LIMITER SW)	
64	*3-344-934-01	BRACKET (BUTTON SPRING)	
65	*3-344-928-01	PLATE (LED),LIGHT INTERCEPTION	
66	X-3344-902-1	SHAFT (STRAP) ASSY	
67	*3-345-041-01	PLATE (REC VOL), SHIELD	
68	3-345-038-01	SPACER, SW PC BOARD	
69	*3-345-033-01	PAPER (A), SHIELD	
70	*3-344-903-01	LABEL, MODEL NUMBER	
71	X-3344-903-1	PANEL ASSY, LOWER	
72	3-345-005-01	PAD (B), LOWER	
73	3-831-441-XX	CUSHION, SPEAKER	
74	*3-338-667-01	SHEET, ADHESIVE, DOUBLE-FACE	
75	7-627-853-58	SCREW, PRECISION +P 2X5 TYPE3	
76	7-621-772-10	SCREW +B 2X4	
77	7-627-553-48	SCREW, PRECISION +P 2X4	
78	7-621-772-38	SCREW +B 2X6	
79	7-621-772-08	SCREW +B 2X3	
80	*3-345-051-01	PAPER (PANEL), SHIELD	
901	A-3015-586-A	PC BOARD ASSY, SYSTEM CONTROL	
902	1-625-178-11	PC BOARD, SW FLEXIBLE	
903	*1-625-179-11	PC BOARD, SW	
904	A-3015-585-A	PC BOARD ASSY	
905	*1-625-172-12	PC BOARD, BATT	
906	1-625-176-11	PC BOARD, BATT FLEXIBLE	
907	*1-625-170-12	PC BOARD, REC VOL	

6-3. CHASSIS SECTION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●A
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(including ●A)
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J901, 902
CNJ901
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J903
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CNJ902
125
supplied with jack
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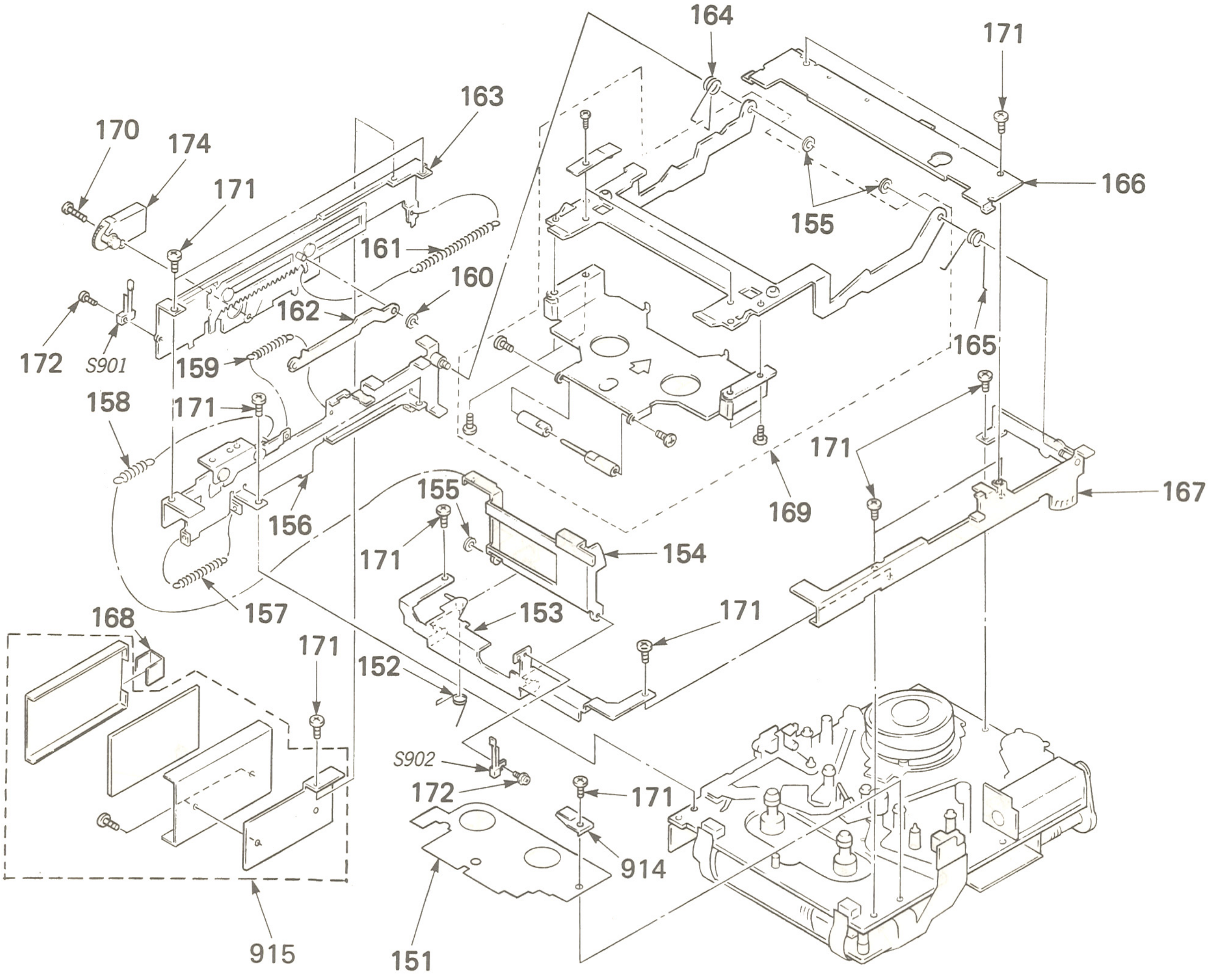
No.	Part No.	Description	Remarks
101	*3-345-020-01	CHASSIS (FRONT)	
102	*3-345-049-01	PAPER, CONDUCTIVE	
103	X-3344-913-1	BRACKET ASSY	
104	*3-345-008-01	COVER, BATTERY CASE	
105	3-344-919-01	CLAW, BATTERY LOCK	
106	*3-344-918-01	PLATE, LOCK, BATTERY	
107	3-344-921-01	SPRING	
108	*3-344-920-01	SHAFT (BATTERY LOCK)	
109	X-3344-901-1	CABINET ASSY	
110	3-344-922-01	TERMINAL, BATTERY	
111	3-345-010-01	CABINET (REAR)	
112	3-344-924-01	SPRING	
113	3-345-009-01	LID, SLIDE, BATTERY	
114	3-344-923-01	ROLLER, LOCK	
115	*3-344-910-01	CHASSIS (REAR)	
116	3-344-912-01	SPRING, TENSION	
117	*3-345-032-01	SHEET (FR PACK)	
118	3-315-384-11	WASHER, STOPPER	
120	3-645-566-00	BAND, BINDING	
121	*X-3344-905-1	CHASSIS (JACK PLATE) ASSY	
122	3-344-914-01	KNOB (MIC ATT)	
123	*3-344-915-01	BRACKET (MIC ATT KNOB)	
124	*3-345-035-01	PLATE (JACK), SHIELD	
125	*3-345-039-01	SHEET (A), MJ	
126	*3-345-040-01	SHEET (B), MJ	
128	3-344-911-01	KNOB (BATTERY)	
129	7-621-772-10	SCREW +B 2X4	
130	3-344-902-01	SCREW, PIN JACK STOPPER	
131	7-621-772-08	SCREW +B 2X3	
132	3-318-203-71	SCREW (B1.7X5), TAPPING	
133	7-627-553-48	SCREW, PRECISION +P 2X4	
134	7-627-553-98	SCREW, PRECISION +P 2X8	
135	3-831-441-XX	CUSHION, SPEAKER	
136	3-686-775-01	SPRING	
137	*3-324-586-11	SHEET, INSULATING, PC BOARD	
908	1-625-175-11	PC BOARD, SYSCON (B) FLEXIBLE	
909	1-625-174-11	PC BOARD, SYSCON (A) FLEXIBLE	
910	1-625-177-11	PC BOARD, FS FLEXIBLE	
911	A-3015-584-A	PC BOARD ASSY, MAIN	
913	*1-625-171-12	PC BOARD, PB VOL	
CNJ901	1-507-593-21	PIN JACK 4P (LINE IN/OUT)	
CNJ902	1-565-040-11	PIN, CONNECTOR (REMOTE)	
J901	1-507-421-31	JACK (MICROPHONE L)	
J902	1-507-421-31	JACK (MICROPHONE R)	
J903	1-565-108-11	JACK, LARGE TYPE (HEADPHONES)	

6-4. MECHANISM SECTION (DATM-02)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S901
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S902
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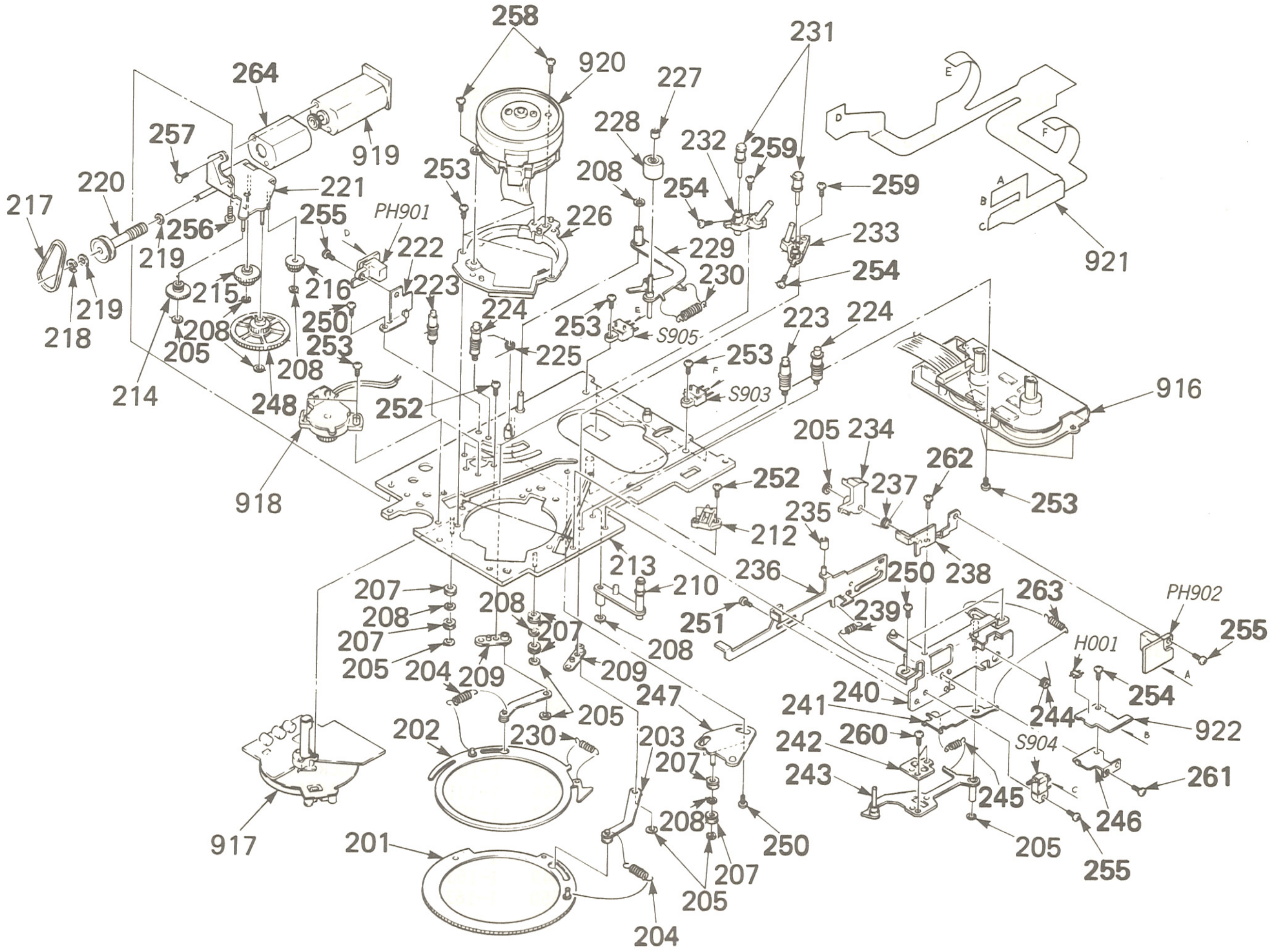
No.	Part No.	Description	Remarks
151	*3-344-994-01	PLATE, BLIND, MD	
152	3-344-987-01	SPRING	
153	*X-3344-910-1	CHASSIS ASSY	
154	*3-344-988-01	PLATE, LOCK	
155	3-344-901-01	WASHER, STOPPER	
156	*X-3344-916-1	CHASSIS (MD-L) ASSY	
157	3-536-820-00	SPRING, TENSION	
158	3-344-989-01	SPRING, TENSION	
159	3-563-104-00	SPRING, TENSION	
160	3-307-948-31	WASHER, NYLON	
161	3-344-967-01	SPRING, TENSION	
162	3-344-963-01	ARM, CASSETTE LID OPEN	
163	*X-3344-907-1	CHASSIS (OPEN SLIDER) ASSY	
165	3-344-978-01	SPRING (R)	
166	*3-344-976-01	CHASSIS (UPPER)	
167	*X-3344-915-1	CHASSIS (MD-R) ASSY	
168	*3-345-043-01	PAPER (RF), SHIELD	
169	X-3344-917-1	FRAME ASSY	
170	7-627-553-98	SCREW, PRECISION +P 2X8	
171	7-621-772-08	SCREW +B 2X3	
172	7-627-850-18	SCREW, PRECISION +P 1.4X2.5	
174	3-681-528-11	DAMPER	
176	3-344-974-01	SPRING (L)	
915	1-464-903-11	MODULATOR, RF	
S901	1-554-154-00	SWITCH, LEAF (SLIDER CHASSIS)	
S902	1-554-154-00	SWITCH, LEAF (CASSETTE CONTROL FRONT CHASSIS)	

6-5. MECHANISM SECTION (DATM-02)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No.	Part No.	Description	Remarks
201	X-3337-602-1	RING (LEFT) ASSY, LOADING	
202	X-3337-601-1	RING (RIGHT) ASSY, LOADING	
203	*X-3337-607-1	ARM (LEFT) ASSY, LOADING	
204	3-337-653-01	SPRING, TENSION	
205	3-559-408-11	WASHER, POLYETHYLENE, DIA.1.2	
206	*X-3337-603-1	ARM (RIGHT) ASSY, LOADING	
207	3-337-622-01	ROLLER, RING	
208	3-701-436-11	WASHER, 1.6 POLYETHYLENE	
209	X-3337-604-1	PLATE ASSY, LOADING	
210	X-3337-613-1	ARM ASSY, F	
212	*3-337-685-01	CATCHER	
213	*X-3337-625-1	CHASSIS ASSY, MECHANICAL	
214	3-337-669-01	GEAR, MIDWAY	
215	3-337-649-01	WHEEL, WORM	
216	3-337-648-01	GEAR (B), LOADING	
217	3-337-652-01	BELT, CONTROL	
218	7-624-102-04	STOP RING 1.5, TYPE -E	
219	3-701-437-21	WASHER	
220	3-337-650-01	GEAR, WORM	
221	*X-3337-617-1	BRACKET ASSY, CONTROL MOTOR	
222	*3-337-610-01	BRACKET (RIGHT), E DETECTION	
223	X-3337-623-1	GUIDE (5.0) ASSY, FIXED	
224	X-3337-621-1	GUIDE (4.0) ASSY, FIXED	
225	3-345-046-01	SPRING	
226	*X-3337-614-1	SLANT ASSY	
227	3-337-626-01	CAP, PINCH ROLLER	
228	X-3337-610-1	PINCH ROLLER ASSY	
229	X-3337-608-1	ARM ASSY, PINCH ROLLER	
230	3-547-659-00	SPRING, TENSION	
231	X-3337-622-1	GUIDE (POM) ASSY, ROLLER	
232	X-3337-616-1	SLANT BLOCK (RIGHT) ASSY	
233	X-3337-615-1	SLANT BLOCK (LEFT) ASSY	
234	3-337-698-01	OPENER, LID	
235	3-337-664-01	ROLLER	
236	X-3337-627-1	SLIDER ASSY, MODE	
237	3-337-607-01	SPRING	
238	X-3337-612-1	BRACKET (L) ASSY, E DETECTION	
239	3-570-892-00	SPRING, TENSION	
240	*X-3337-619-1	CHASSIS ASSY, TENSION REGULATOR	
241	*3-337-657-01	LEVER, LIMITER	
242	X-3337-611-1	HOLDER ASSY, MAGNET	
243	X-3337-609-1	ARM ASSY, TENSION REGULATOR	
244	3-337-673-01	SPRING	
245	3-307-377-00	SPRING, TENSION	
246	*3-337-662-01	BRACKET, HOLE ELEMENT	
247	*X-3337-605-1	ARM ASSY, RING ROLLER	
248	3-337-647-01	GEAR (A), LOADING	
249	*3-337-696-01	SHEET, INSULATING	
250	7-621-772-08	SCREW +B 2X3	
251	3-703-502-11	SCREW 1.4X2	
252	7-627-552-47	SCREW, PRECISION +P 1.7X4	
253	7-621-772-18	SCREW +B 2X4	
254	7-627-551-17	SCREW, PRECISION +P 1.4X2	
255	7-621-772-20	SCREW +B 2X5	
256	7-628-253-00	SCREW +PS 2X4	
257	7-627-553-27	SCREW, PRECISION +P 2X2.5	
258	7-621-255-25	SCREW +P 2X4	
259	3-703-502-81	SCREW 1.4X6	
260	7-627-551-87	PRECISION SCREW +P 1.4X1.8	
261	7-627-552-27	SCREW, PRECISION +P 1.7X2	
262	7-627-552-18	SCREW, PRECISION +P 1.7X1.6	
263	3-561-626-00	SPRING, TENSION	
264	*3-345-101-01	PLATE (LOADING MOTOR), SHIELD	
914	1-808-281-11	SENSOR	
916	8-835-285-01	MOTOR, DC U-2C	
917	8-835-206-01	MOTOR, DC BHF-2803A	
918	1-464-724-11	ENCODER, ROTARY	
919	X-3337-626-1	L MOTOR ASSY	
920	8-848-509-01	DRUM ASSY DOH-01E	
921	1-625-241-11	PC BOARD, MD (A) FLEXIBLE	
922	A-2096-054-A	MOUNTED PCB, TENSION REGULATOR	

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

Ref.No.	Part No.	Description			
901	A-3015-586-A	PC BOARD ASSY, SYSTEM CONTROL			
902	1-625-178-11	PC BOARD, SW FLEXIBLE			
903	*1-625-179-11	PC BOARD, SW			
904	A-3015-585-A	PC BOARD ASSY			
905	*1-625-172-12	PC BOARD, BATT			
906	1-625-176-11	PC BOARD, BATT FLEXIBLE			
907	*1-625-170-12	PC BOARD, REC VOL			
908	1-625-175-11	PC BOARD, SYSCON (B) FLEXIBLE			
909	1-625-174-11	PC BOARD, SYSCON (A) FLEXIBLE			
910	1-625-177-11	PC BOARD, FS FLEXIBLE			
911	A-3015-584-A	PC BOARD ASSY, MAIN			
913	*1-625-171-12	PC BOARD, PB VOL			
914	1-808-281-11	SENSOR			
915	1-464-903-11	MODULATOR, RF			
916	8-835-285-01	MOTOR, DC U-2C			
917	8-835-206-01	MOTOR, DC BHF-2803A			
918	1-464-724-11	ENCODER, ROTARY			
919	X-3337-626-1	L MOTOR ASSY			
920	8-848-509-01	DRUM ASSY DOH-01E			
921	1-625-241-11	PC BOARD, MD (A) FLEXIBLE			
922	A-2096-054-A	MOUNTED PCB, TENSION REGULATOR			
C1	1-163-100-00	CERAMIC CHIP	20PF	5%	50V
C2	1-163-100-00	CERAMIC CHIP	20PF	5%	50V
C3	1-124-225-00	ELECT	100MF	20%	6.3V
C4	1-135-091-00	TANTAL. CHIP	1MF	10%	16V
C5	1-135-091-00	TANTAL. CHIP	1MF	10%	16V
C6	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C7	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C8	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C101	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C102	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C103	1-124-287-00	ELECT	10MF	20%	10V
C104	1-124-287-00	ELECT	10MF	20%	10V
C105	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C106	1-136-162-00	FILM	0.056MF	5%	50V
C107	1-124-287-00	ELECT	10MF	20%	10V
C108	1-126-151-11	ELECT	4.7MF	20%	16V
C109	1-124-462-00	ELECT	10MF	20%	16V
C110	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C111	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C112	1-103-733-00	POLYSTYRENE	0.0022MF	5%	50V
C113	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C114	1-124-225-00	ELECT	100MF	20%	6.3V
C115	1-124-461-11	ELECT	4.7MF	20%	16V
C116	1-124-461-11	ELECT	4.7MF	20%	16V
C117	1-124-287-00	ELECT	10MF	20%	10V
C118	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C119	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C120	1-124-287-00	ELECT	10MF	20%	10V
C121	1-124-287-00	ELECT	10MF	20%	10V
C122	1-163-022-00	CERAMIC CHIP	0.012MF	10%	50V
C123	1-163-133-00	CERAMIC CHIP	470PF	10%	50V
C201	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C202	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C203	1-124-287-00	ELECT	10MF	20%	10V
C204	1-124-287-00	ELECT	10MF	20%	10V
C205	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C206	1-136-162-00	FILM	0.056MF	5%	50V
C207	1-124-287-00	ELECT	10MF	20%	10V
C208	1-126-151-11	ELECT	4.7MF	20%	16V
C209	1-124-462-00	ELECT	10MF	20%	16V
C210	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C211	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C212	1-103-733-00	POLYSTYRENE	0.0022MF	5%	50V
C213	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C214	1-124-225-00	ELECT	100MF	20%	6.3V
C215	1-124-461-11	ELECT	4.7MF	20%	16V
C216	1-124-461-11	ELECT	4.7MF	20%	16V
C217	1-124-287-00	ELECT	10MF	20%	10V
C218	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C219	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C220	1-124-287-00	ELECT	10MF	20%	10V
C221	1-124-287-00	ELECT	10MF	20%	10V
C222	1-163-022-00	CERAMIC CHIP	0.012MF	10%	50V
C223	1-163-133-00	CERAMIC CHIP	470PF	10%	50V
C301	1-124-236-00	ELECT	47MF	20%	16V
C302	1-124-236-00	ELECT	47MF	20%	16V
C303	1-124-222-00	ELECT	22MF	20%	6.3V
C304	1-124-222-00	ELECT	22MF	20%	6.3V
C305	1-124-222-00	ELECT	22MF	20%	6.3V
C306	1-124-222-00	ELECT	22MF	20%	6.3V
C307	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C308	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C309	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C310	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C311	1-124-462-00	ELECT	10MF	20%	16V
C312	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C313	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C314	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C315	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C316	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C317	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C318	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V
C319	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C320	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C321	1-124-462-00	ELECT	10MF	20%	16V
C322	1-124-462-00	ELECT	10MF	20%	16V
C323	1-124-229-00	ELECT	33MF	20%	10V
C324	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C325	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C326	1-124-462-00	ELECT	10MF	20%	16V
C327	1-124-462-00	ELECT	10MF	20%	16V
C328	1-163-081-00	CERAMIC CHIP	0.22MF		25V
C329	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C330	1-124-462-00	ELECT	10MF	20%	16V
C332	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C333	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C334	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C335	1-124-461-11	ELECT	4.7MF	20%	16V
C336	1-124-461-11	ELECT	4.7MF	20%	16V
C337	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C338	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C339	1-124-443-00	ELECT	100MF	20%	10V
C340	1-124-436-00	ELECT	3.3MF	20%	25V
C341	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C342	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C344	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C345	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C346	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C347	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C348	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C349	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C350	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C351	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C352	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C353	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C354	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C355	1-124-224-00	ELECT	47MF	20%	6.3V
C356	1-124-229-00	ELECT	33MF	20%	6.3V
C357	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C358	1-124-224-00	ELECT	47MF	20%	6.3V
C359	1-124-444-00	ELECT	220MF	20%	6.3V
C360	1-124-229-00	ELECT	33MF	20%	6.3V
C361	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C362	1-135-099-00	TANTAL. CHIP	2.2MF	10%	6.3V
C363	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C364	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C501	1-136-157-00	FILM	0.022MF	5%	50V
C502	1-136-155-00	FILM	0.015MF	5%	50V
C503	1-131-388-00	TANTALUM	68MF	10%	6.3V
C504	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C505	1-136-160-00	FILM	0.039MF	5%	50V
C506	1-136-169-00	FILM	0.22MF	5%	50V
C507	1-136-172-00	FILM	0.39MF	5%	50V
C508	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C509	1-124-462-00	ELECT	10MF	20%	16V
C510	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C511	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C512	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C513	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C514	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C515	1-163-098-00	CERAMIC CHIP	16PF	5%	50V
C516	1-163-013-00	CERAMIC CHIP	0.0022MF	10%	50V
C517	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C518	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C519	1-124-222-00	ELECT	22MF	20%	6.3V
C520	1-124-462-00	ELECT	10MF	20%	16V
C521	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C522	1-124-222-00	ELECT	22MF	20%	6.3V
C523	1-124-236-00	ELECT	47MF	20%	10V
C524	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C529	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C530	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C531	1-124-222-00	ELECT	22MF	20%	6.3V
C532	1-124-225-00	ELECT	100MF	20%	6.3V
C533	1-135-091-00	TANTAL. CHIP	1MF	10%	16V
C534	1-126-103-11	ELECT	470MF	20%	10V
C535	1-124-462-00	ELECT	10MF	20%	16V
C536	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C537	1-124-236-00	ELECT	47MF	20%	10V
C538	1-124-462-00	ELECT	10MF	20%	16V
C539	1-136-173-00	FILM	0.47MF	5%	50V
C540	1-136-169-00	FILM	0.22MF	5%	50V
C541	1-124-462-00	ELECT	10MF	20%	16V
C542	1-124-462-00	ELECT	10MF	20%	16V
C543	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C544	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C545	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C546	1-131-388-00	TANTALUM	68MF	10%	6.3V
C547	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C548	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C549	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C550	1-163-141-00	CERAMIC CHIP	0.001MF	10%	50V
C551	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C552	1-136-157-00	FILM	0.022MF	5%	50V
C553	1-136-157-00	FILM	0.022MF	5%	50V
C554	1-136-153-00	FILM	0.01MF	5%	50V
C555	1-136-153-00	FILM	0.01MF	5%	50V
C556	1-131-382-00	TANTALUM	6.8MF	10%	6.3V
C557	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C558	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C559	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C560	1-136-153-00	FILM	0.01MF	5%	50V
C561	1-124-462-00	ELECT	10MF	20%	16V
C562	1-124-236-00	ELECT	47MF	20%	10V
C563	1-136-169-00	FILM	0.22MF	5%	50V
C564	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C565	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C566	1-163-021-00	CERAMIC CHIP	0.01MF	10%	50V
C567	1-124-462-00	ELECT	10MF	20%	16V
C568	1-124-462-00	ELECT	10MF	20%	16V
C569	1-135-070-00	TANTAL. CHIP	0.1MF	10%	35V
C570	1-135-091-00	TANTAL. CHIP	1MF	10%	16V
C571	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V

Ref.No.	Part No.	Description		
C572	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C573	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C574	1-135-091-00	TANTAL. CHIP 1MF	10%	16V
C575	1-124-225-00	ELECT 100MF	20%	6.3V
C576	1-124-462-00	ELECT 10MF	20%	16V
C577	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C578	1-124-225-00	ELECT 100MF	20%	6.3V
C579	1-124-462-00	ELECT 10MF	20%	16V
C580	1-163-013-00	CERAMIC CHIP 0.0022MF	10%	50V
C581	1-124-236-00	ELECT 47MF	20%	10V
C582	1-124-436-00	ELECT 3.3MF	20%	25V
C583	1-124-436-00	ELECT 3.3MF	20%	25V
C584	1-124-225-00	ELECT 100MF	20%	6.3V
C586	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C587	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C588	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C589	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C590	1-124-222-00	ELECT 22MF	20%	6.3V
C591	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C592	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C593	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C594	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C595	1-124-462-00	ELECT 10MF	20%	16V
C596	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C597	1-163-019-00	CERAMIC CHIP 0.0068MF	10%	50V
C598	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C599	1-163-023-00	CERAMIC CHIP 0.015MF	10%	50V
C600	1-124-462-00	ELECT 10MF	20%	16V
C601	1-163-021-00	CERAMIC CHIP 0.01MF	10%	50V
C602	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C603	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C604	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C605	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C606	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C607	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C608	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C609	1-163-141-00	CERAMIC CHIP 0.001MF	10%	50V
C610	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C611	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C612	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C613	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C614	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C615	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V
C616	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C617	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C618	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C619	1-163-093-00	CERAMIC CHIP 10PF	5%	50V
C620	1-135-091-00	TANTAL. CHIP 1MF	10%	16V
C622	1-124-576-11	ELECT 220MF	20%	4V
C623	1-124-576-11	ELECT 220MF	20%	4V
C624	1-124-222-00	ELECT 22MF	20%	6.3V
C801	1-126-103-11	ELECT 470MF	20%	10V
C802	1-124-442-00	ELECT 330MF	20%	6.3V
C803	1-124-442-00	ELECT 330MF	20%	6.3V
C804	1-124-120-11	ELECT 220MF	20%	25V
C805	1-124-120-11	ELECT 220MF	20%	25V
C806	1-124-444-00	ELECT 220MF	20%	10V
C807	1-124-234-00	ELECT 22MF	20%	10V
C808	1-124-234-00	ELECT 22MF	20%	10V
C809	1-163-034-00	CERAMIC CHIP 0.033MF	10%	25V

Ref.No.	Part No.	Description		
C810	1-124-234-00	ELECT 22MF	20%	10V
C811	1-124-462-00	ELECT 10MF	20%	16V
C812	1-135-072-21	TANTAL. CHIP 0.22MF	10%	35V
C815	1-163-135-00	CERAMIC CHIP 560PF	10%	50V
C816	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C817	1-126-090-11	ELECT 82MF	20%	10V
C818	1-124-234-00	ELECT 22MF	20%	10V
C819	1-163-809-11	CERAMIC CHIP 0.047MF	10%	25V
C820	1-163-133-00	CERAMIC CHIP 470PF	10%	50V
C901	1-102-106	CERAMIC 100P		
C902	1-102-106	CERAMIC 100P		
CN1	1-565-582-31	PIN, CONNECTOR (PC BOARD) 2P		
CN2	1-565-588-11	PIN, CONNECTOR (PC BOARD) 8P		
CN3	1-565-582-21	PIN, CONNECTOR (PC BOARD) 2P		
CN4	1-565-582-11	PIN, CONNECTOR (PC BOARD) 2P		
CN5	1-565-582-51	PIN, CONNECTOR (PC BOARD) 2P		
CN301	1-565-570-21	PIN, CONNECTOR (PC BOARD) 4P		
CN302	1-565-572-21	PIN, CONNECTOR (PC BOARD) 6P		
CN303	1-565-572-11	PIN, CONNECTOR (PC BOARD) 6P		
CN304	1-565-572-31	PIN, CONNECTOR (PC BOARD) 6P		
CN305	1-565-574-11	PIN, CONNECTOR (PC BOARD) 8P		
CN306	1-565-568-21	PIN, CONNECTOR (PC BOARD) 2P		
CN307	1-565-568-11	PIN, CONNECTOR (PC BOARD) 2P		
CN308	1-565-568-31	PIN, CONNECTOR (PC BOARD) 2P		
CN309	1-565-570-11	PIN, CONNECTOR (PC BOARD) 4P		
CN311	1-565-568-11	PIN, CONNECTOR (PC BOARD) 2P		
CN312	1-565-571-21	PIN, CONNECTOR (PC BOARD) 5P		
CN501	1-565-568-21	PIN, CONNECTOR (PC BOARD) 2P		
CN502	1-565-570-11	PIN, CONNECTOR (PC BOARD) 4P		
CN504	1-565-568-31	PIN, CONNECTOR (PC BOARD) 2P		
CN505	1-565-571-21	PIN, CONNECTOR (PC BOARD) 5P		
CN506	1-565-568-41	PIN, CONNECTOR (PC BOARD) 2P		
CN507	1-565-568-11	PIN, CONNECTOR (PC BOARD) 2P		
CN508	1-565-571-11	PIN, CONNECTOR (PC BOARD) 5P		
CN509	1-565-574-11	PIN, CONNECTOR (PC BOARD) 8P		
CN510	1-565-578-11	PIN, CONNECTOR (PC BOARD) 12P		
CN511	1-565-568-51	PIN, CONNECTOR (PC BOARD) 2P		
CNJ901	1-507-593-21	PIN JACK 4P (LINE IN/OUT)		
CNJ902	1-565-040-11	PIN, CONNECTOR (REMOTE)		
CP301	1-464-902-11	CIRCUIT UNIT, AUDIO		
D1	1-808-243-11	DIODE (BLOCK TYPE)		
D2	8-719-939-97	DIODE GL5EG42		
D3	8-719-939-42	DIODE GL5HD42		
D4	8-719-939-36	DIODE GL5HY42		
D5	8-719-940-38	DIODE DCB015		
D6	8-719-404-12	DIODE MA159		
D7	8-719-946-86	DIODE SLM-125MC		
D8	8-719-946-86	DIODE SLM-125MC		
D9	8-719-946-86	DIODE SLM-125MC		
D10	8-719-946-87	DIODE SLM-125VC		
D11	8-719-946-87	DIODE SLM-125VC		
D12	8-719-946-87	DIODE SLM-125VC		
D13	8-719-946-87	DIODE SLM-125VC		
D14	8-719-946-86	DIODE SLM-125MC		
D15	8-719-946-86	DIODE SLM-125MC		

Ref.No.	Part No.	Description
D16	8-719-946-86	DIODE SLM-125MC
D17	8-719-946-87	DIODE SLM-125VC
D18	8-719-946-87	DIODE SLM-125VC
D19	8-719-946-87	DIODE SLM-125VC
D20	8-719-946-87	DIODE SLM-125VC
D21	8-719-946-86	DIODE SLM-125MC
D22	8-719-911-19	DIODE ISS119
D23	8-719-911-19	DIODE ISS119
D101	8-719-101-23	DIODE 1SS123
D102	8-719-404-12	DIODE MA159
D201	8-719-101-23	DIODE 1SS123
D202	8-719-404-12	DIODE MA159
D301	8-719-404-12	DIODE MA159
D302	8-719-100-05	DIODE 1S2837
D303	8-719-100-03	DIODE 1S2835
D304	8-719-940-38	DIODE DCB015
D502	8-719-100-05	DIODE 1S2837
D504	8-719-940-45	DIODE DWA010
D505	8-719-403-94	DIODE MA160
D506	8-719-940-45	DIODE DWA010
D507	8-719-100-05	DIODE 1S2837
D509	8-719-940-45	DIODE DWA010
D510	8-719-100-05	DIODE 1S2837
D511	8-719-101-23	DIODE 1SS123
D512	8-719-915-30	DIODE FC53M
D513	8-719-100-05	DIODE 1S2837
D801	8-719-100-05	DIODE 1S2837
D803	8-719-105-45	DIODE RD3.3M-B1
F801	1-532-779-21	FUSE, MICRO (SECONDARY)
FL1	1-236-071-11	ENCAPSULATED COMPONENT
FL301	1-464-900-11	FILTER UNIT, LOW PASS
H001	8-719-800-11	THS105-SONY1-TE85L
IC1	8-759-105-68	IC UPD7225G-00
IC2	8-759-970-58	IC BU3508K
IC3	8-759-140-57	IC UPD4990AG-T1
IC4	8-759-970-62	IC BA6820F-T1
IC101	8-759-970-69	IC LF353M-FL63
IC201	8-759-970-69	IC LF353M-FL63
IC301	8-759-970-69	IC LF353M-FL63
IC302	8-759-970-67	IC LM833M-FL63
IC303	8-759-970-67	IC LM833M-FL63
IC304	8-759-009-07	IC MC14053BF
IC305	8-759-970-69	IC LF353M-FL63
IC306	8-752-031-78	IC CXA1144S
IC307	8-759-701-43	IC NJM3414D
IC308	8-759-100-94	IC UPC358G2
IC309	8-759-701-54	IC NJM2073D
IC310	8-759-941-71	IC PCM55HP-STA
IC311	8-759-945-37	IC SM5806ST
IC312	8-759-013-41	IC MC4044ML
IC313	8-759-931-47	IC SN74LS628NS
IC314	8-759-106-94	IC UPD74HC163G
IC315	8-759-106-94	IC UPD74HC163G
IC316	8-759-204-96	IC TC74HC04F
IC501	8-759-009-51	IC MC14538BF
IC502	8-759-946-81	IC CXD1052Q-Z
IC503	8-759-013-22	IC LM358MR
IC504	8-759-013-22	IC LM358MR
IC505	8-759-140-60	IC UPD6335G
IC506	8-759-970-58	IC BU3508K
IC507	8-759-142-99	IC UPD75108GF-719-3BE
IC508	8-759-030-03	IC LM393MR
IC509	8-759-030-06	IC LM324MR
IC510	8-759-009-07	IC MC14053BF
IC511	8-759-013-22	IC LM358MR
IC512	8-759-914-15	IC MB3763PF
IC513	8-759-013-22	IC LM358MR
IC514	8-759-030-06	IC LM324MR
IC515	8-752-030-63	IC CXA1046M
IC516	8-759-009-51	IC MC14538BF
IC517	8-759-909-45	IC CX20084
IC518	8-752-017-40	IC CX20174
IC519	8-759-030-06	IC LM324MR
IC520	8-759-030-03	IC LM393MR
IC521	8-759-030-06	IC LM324MR
IC522	8-759-030-03	IC LM393MR
IC523	8-759-008-48	IC MC74HC86F
IC524	8-759-009-06	IC MC14052BF
IC525	8-759-970-59	IC TLC272CPS
IC526	8-759-970-59	IC TLC272CPS
IC527	8-752-323-50	IC CXK5864M-10L
IC528	8-752-323-50	IC CXK5864M-10L
IC529	8-759-933-85	IC CXD1009Q
IC530	8-759-933-84	IC CXD1008Q
IC531	8-759-009-07	IC MC14053BF
IC533	8-759-013-27	IC MC34063ML
IC534	8-759-914-44	IC TL431CLPB
IC801	8-759-937-54	IC S-81250HG-RD-S
IC802	8-759-940-45	IC S-8054HN-CB
IC803	1-464-899-11	CONVERTER UNIT, DC-DC
J901	1-507-421-31	JACK (MICROPHONE L)
J902	1-507-421-31	JACK (MICROPHONE R)
J903	1-565-108-11	JACK, LARGE TYPE (HEADPHONES)
JR601	1-216-295-00	METAL GLAZE 0 5% 1/10W
L301	1-410-188-51	INDUCTOR CHIP 0.47UH
L302	1-410-328-11	INDUCTOR 10UH
L303	1-410-328-11	INDUCTOR 10UH
L304	1-421-665-11	COIL
L501	1-421-665-11	COIL
L502	1-406-264-11	COIL (OSC)
L503	1-459-857-11	COIL (WITH CORE)
L504	1-408-575-00	INDUCTOR 100UH
ND1	1-808-231-11	**DISPLAY PANEL, LIQUID CRYSTAL**
N051	3-831-441-XX	CUSHION,CABINET UPPER 10X7X0.3
PH901	1-807-698-11	PHOTO SENSOR
PH902	1-807-698-11	PHOTO SENSOR
Q1	8-729-901-00	TRANSISTOR DTC124EK
Q2	8-729-402-78	TRANSISTOR XN6401
Q3	8-729-402-78	TRANSISTOR XN6401
Q101	8-729-203-21	TRANSISTOR 2SK389-GR
Q102	8-729-116-64	TRANSISTOR 2SK508-K51
Q103	8-729-202-38	TRANSISTOR 2SC3326N
Q104	8-729-159-64	TRANSISTOR 2SD596
Q105	8-729-100-67	TRANSISTOR 2SC1623-L7
Q201	8-729-203-21	TRANSISTOR 2SK389-GR

Ref.No.	Part No.	Description
Q202	8-729-116-64	TRANSISTOR 2SK508-K51
Q203	8-729-202-38	TRANSISTOR 2SC3326N
Q204	8-729-159-64	TRANSISTOR 2SD596
Q205	8-729-100-67	TRANSISTOR 1623-L7
Q301	8-729-402-19	TRANSISTOR XN6501
Q302	8-729-402-19	TRANSISTOR XN6501
Q303	8-729-901-01	TRANSISTOR DTC144EK
Q304	8-729-100-67	TRANSISTOR 2SC1623-L7
Q305	8-729-271-22	TRANSISTOR 2SC27120G
Q306	8-729-901-05	TRANSISTOR DTA124EK
Q307	8-729-901-05	TRANSISTOR DTA124EK
Q308	8-729-901-05	TRANSISTOR DTC124EK
Q309	8-729-101-07	TRANSISTOR 2SB798
Q310	8-729-402-19	TRANSISTOR XN6501
Q311	8-729-199-92	TRANSISTOR 2SD999
Q312	8-729-402-78	TRANSISTOR XN6401
Q501	8-729-100-76	TRANSISTOR 2SA812
Q502	8-729-100-67	TRANSISTOR 2SC1623-L7
Q503	8-729-100-76	TRANSISTOR 2SA812
Q504	8-729-100-67	TRANSISTOR 2SC1623-L7
Q505	8-729-100-76	TRANSISTOR 2SA812
Q506	8-729-100-67	TRANSISTOR 2SC1623-L7
Q508	8-729-100-76	TRANSISTOR 2SA812
Q509	8-729-903-82	TRANSISTOR FMW2
Q510	8-729-100-76	TRANSISTOR 2SA812
Q511	8-729-100-76	TRANSISTOR 2SA812
Q512	8-729-900-98	TRANSISTOR DTC143TK
Q513	8-729-100-76	TRANSISTOR 2SA812
Q514	8-729-900-98	TRANSISTOR DTC143TK
Q517	8-729-100-67	TRANSISTOR 2SC1623-L7
Q518	8-729-102-78	TRANSISTOR 2SB962
Q519	8-729-162-44	TRANSISTOR 2SB624-BV4
Q520	8-729-100-76	TRANSISTOR 2SA812
Q521	8-729-159-64	TRANSISTOR 2SD596
Q522	8-729-100-67	TRANSISTOR 2SC1623-L7
Q523	8-729-162-44	TRANSISTOR 2SB624-BV4
Q524	8-729-100-76	TRANSISTOR 2SA812
Q525	8-729-159-64	TRANSISTOR 2SD596
Q526	8-729-100-67	TRANSISTOR 2SC1623-L7
Q527	8-729-805-67	TRANSISTOR 2SA1342
Q528	8-729-805-67	TRANSISTOR 2SA1342
Q529	8-729-901-00	TRANSISTOR DTC124EK
Q530	8-729-100-76	TRANSISTOR 2SA812
Q531	8-729-102-78	TRANSISTOR 2SB962
Q532	8-729-805-45	TRANSISTOR 2SC3395
Q533	8-729-805-45	TRANSISTOR 2SC3395
Q534	8-729-100-76	TRANSISTOR 2SA812
Q535	8-729-111-14	TRANSISTOR 2SA1385-L
Q536	8-729-903-82	TRANSISTOR FMW2
Q537	8-729-903-82	TRANSISTOR FMW2
Q538	8-729-100-67	TRANSISTOR 2SC1623-L7
Q539	8-729-100-67	TRANSISTOR 2SC1623-L7
Q540	8-729-100-67	TRANSISTOR 2SC162G-L7
Q541	8-729-100-67	TRANSISTOR 2SC1623-L7
Q542	8-729-100-67	TRANSISTOR 2SC1623-L7
Q543	8-729-100-76	TRANSISTOR 2SA812
Q544	8-729-100-67	TRANSISTOR 2SC1623-L7

Ref.No.	Part No.	Description			
Q545	8-729-100-76	TRANSISTOR 2SA812			
Q546	8-729-100-67	TRANSISTOR 2SC1623-L7			
Q550	8-729-101-07	TRANSISTOR 2SB798			
Q801	8-729-111-14	TRANSISTOR 2SA1385-L			
Q802	8-729-901-00	TRANSISTOR DTC124EK			
Q804	8-729-901-46	TRANSISTOR DTA114YK			
Q805	8-729-100-67	TRANSISTOR 2SC1623-L7			
Q806	8-729-111-14	TRANSISTOR 2SA1385-L			
Q807	8-729-100-67	TRANSISTOR 2SC1623-L7			
R1	1-216-025-00	METAL GLAZE	100	5%	1/10W
R2	1-216-025-00	METAL GLAZE	100	5%	1/10W
R3	1-216-025-00	METAL GLAZE	100	5%	1/10W
R4	1-216-103-00	METAL GLAZE	180K	5%	1/10W
R5	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R6	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R7	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R8	1-216-045-00	METAL GLAZE	680	5%	1/10W
R9	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R10	1-216-045-00	METAL GLAZE	680	5%	1/10W
R11	1-216-025-00	METAL GLAZE	100	5%	1/10W
R12	1-216-025-00	METAL GLAZE	100	5%	1/10W
R13	1-216-025-00	METAL GLAZE	100	5%	1/10W
R14	1-216-045-00	METAL GLAZE	680	5%	1/10W
R15	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R16	1-216-017-00	METAL GLAZE	47	5%	1/10W
R18	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R19	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R20	1-216-043-00	METAL GLAZE	560	5%	1/10W
R21	1-216-043-00	METAL GLAZE	560	5%	1/10W
R22	1-216-043-00	METAL GLAZE	560	5%	1/10W
R23	1-216-043-00	METAL GLAZE	560	5%	1/10W
R24	1-216-043-00	METAL GLAZE	560	5%	1/10W
R25	1-216-043-00	METAL GLAZE	560	5%	1/10W
R26	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R27	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R28	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R29	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R30	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R31	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R32	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R33	1-216-047-00	METAL GLAZE	820	5%	1/10W
R101	1-216-619-11	METAL CHIP	47	0.50%	1/10W
R102	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R103	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R104	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R105	1-216-025-00	METAL GLAZE	100	5%	1/10W
R106	1-216-025-00	METAL GLAZE	100	5%	1/10W
R107	1-216-672-11	METAL CHIP	7.5K	0.50%	1/10W
R108	1-216-646-11	METAL CHIP	620	0.50%	1/10W
R109	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R110	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R111	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R112	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R113	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R114	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R115	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R116	1-216-017-00	METAL GLAZE	47	5%	1/10W

Ref.No.	Part No.	Description			
R117	1-216-636-11	METAL CHIP	240	0.50%	1/10W
R118	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R119	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R120	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R121	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R122	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R123	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R124	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R125	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R126	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R127	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W
R128	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R129	1-216-684-11	METAL CHIP	24K	0.50%	1/10W
R130	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R131	1-216-658-11	METAL CHIP	2K	0.50%	1/10W
R132	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R133	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R134	1-216-033-00	METAL GLAZE	220	5%	1/10W
R135	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R136	1-216-160-00	METAL GLAZE	27	5%	1/8W
R137	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R138	1-216-068-00	METAL GLAZE	6.2K	5%	1/10W
R139	1-216-068-00	METAL GLAZE	6.2K	5%	1/10W
R140	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R141	1-216-041-00	METAL GLAZE	470	5%	1/10W
R142	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R143	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R144	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R145	1-216-011-00	METAL GLAZE	27	5%	1/10W
R146	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R147	1-216-619-11	METAL CHIP	47	0.50%	1/10W
R148	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R149	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R150	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R151	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R152	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R153	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R154	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R155	1-216-033-00	METAL GLAZE	220	5%	1/10W
R201	1-216-619-11	METAL CHIP	47	0.50%	1/10W
R202	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R203	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R204	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W
R205	1-216-025-00	METAL GLAZE	100	5%	1/10W
R206	1-216-025-00	METAL GLAZE	100	5%	1/10W
R207	1-216-672-11	METAL CHIP	7.5K	0.50%	1/10W
R208	1-216-646-11	METAL CHIP	620	0.50%	1/10W
R209	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R210	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R211	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W
R212	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R213	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R214	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R215	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R216	1-216-017-00	METAL GLAZE	47	5%	1/10W
R217	1-216-636-11	METAL CHIP	240	0.50%	1/10W
R218	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R219	1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W
R220	1-216-222-00	METAL GLAZE	10K	5%	1/8W
R221	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R222	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R223	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R224	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R225	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R226	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R227	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W
R228	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W
R229	1-216-684-11	METAL CHIP	24K	0.50%	1/10W
R230	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R231	1-216-658-11	METAL CHIP	2K	0.50%	1/10W
R232	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W
R233	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R234	1-216-033-00	METAL GLAZE	220	5%	1/10W
R235	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R236	1-216-160-00	METAL GLAZE	27	5%	1/8W
R237	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R238	1-216-068-00	METAL GLAZE	6.2K	5%	1/10W
R239	1-216-068-00	METAL GLAZE	6.2K	5%	1/10W
R240	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R241	1-216-041-00	METAL GLAZE	470	5%	1/10W
R242	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R243	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R244	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R245	1-216-011-00	METAL GLAZE	27	5%	1/10W
R246	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R247	1-216-619-11	METAL CHIP	47	0.50%	1/10W
R248	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R249	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R250	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R251	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R252	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R253	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R254	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R255	1-216-033-00	METAL GLAZE	220	5%	1/10W
R301	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W
R302	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R303	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R304	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R305	1-218-236-91	METAL GLAZE	1		1/4W
R306	1-216-009-00	METAL GLAZE	22	5%	1/10W
R307	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R308	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R309	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R310	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R311	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R312	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R313	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R314	1-216-066-00	METAL GLAZE	5.1K	5%	1/10W
R315	1-216-066-00	METAL GLAZE	5.1K	5%	1/10W
R316	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R317	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R320	1-216-043-00	METAL GLAZE	560	5%	1/10W
R321	1-216-056-00	METAL GLAZE	2K	5%	1/10W
R322	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

Ref.No.	Part No.	Description			
R323	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R324	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R325	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R326	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R327	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R328	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R329	1-216-037-00	METAL GLAZE	330	5%	1/10W
R330	1-216-037-00	METAL GLAZE	330	5%	1/10W
R331	1-216-033-00	METAL GLAZE	220	5%	1/10W
R332	1-216-037-00	METAL GLAZE	330	5%	1/10W
R333	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R334	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R335	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R336	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R501	1-216-698-11	METAL CHIP	91K	0.50%	1/10W
R502	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R503	1-216-697-11	METAL CHIP	82K	0.50%	1/10W
R504	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R505	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R506	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R507	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R508	1-216-090-00	METAL GLAZE	51K	5%	1/10W
R509	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R510	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R511	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R512	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R513	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R514	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R515	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R516	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R517	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R519	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R520	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R521	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R522	1-216-064-00	METAL GLAZE	4.3K	5%	1/10W
R523	1-216-047-00	METAL GLAZE	820	5%	1/10W
R524	1-216-084-00	METAL GLAZE	30K	5%	1/10W
R525	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R526	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R527	1-216-115-00	METAL GLAZE	560K	5%	1/10W
R528	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R529	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R531	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R532	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R533	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R534	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R535	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R536	1-216-680-11	METAL CHIP	16K	0.50%	1/10W
R537	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R538	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R539	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R540	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R541	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R542	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R543	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R544	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R545	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R546	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R547	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R548	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R549	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R550	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R551	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R552	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R553	1-216-017-00	METAL GLAZE	47	5%	1/10W
R554	1-216-025-00	METAL GLAZE	100	5%	1/10W
R555	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R556	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R557	1-216-045-00	METAL GLAZE	680	5%	1/10W
R558	1-216-017-00	METAL GLAZE	47	5%	1/10W
R559	1-216-025-00	METAL GLAZE	100	5%	1/10W
R560	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R561	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R562	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R563	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R564	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R565	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R574	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R575	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R576	1-216-029-00	METAL GLAZE	150	5%	1/10W
R577	1-216-025-00	METAL GLAZE	100	5%	1/10W
R578	1-216-025-00	METAL GLAZE	100	5%	1/10W
R579	1-218-236-91	METAL GLAZE	1		1/4W
R580	1-218-236-91	METAL GLAZE	1		1/4W
R581	1-216-308-00	METAL GLAZE	4.7	5%	1/10W
R582	1-216-037-00	METAL GLAZE	330	5%	1/10W
R583	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R584	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R585	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R586	1-216-114-00	METAL GLAZE	510K	5%	1/10W
R587	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R588	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R589	1-216-027-00	METAL GLAZE	120	5%	1/10W
R590	1-218-232-91	METAL GLAZE	4.7		1/2W
R591	1-216-031-00	METAL GLAZE	180	5%	1/10W
R592	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R593	1-216-041-00	METAL GLAZE	470	5%	1/10W
R594	1-216-041-00	METAL GLAZE	470	5%	1/10W
R595	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R596	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R597	1-216-027-00	METAL GLAZE	120	5%	1/10W
R598	1-216-031-00	METAL GLAZE	180	5%	1/10W
R599	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R600	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R604	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R605	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R606	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R607	1-216-017-00	METAL GLAZE	47	5%	1/10W
R608	1-216-696-11	METAL CHIP	75K	0.50%	1/10W
R609	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R610	1-216-684-11	METAL CHIP	24K	0.50%	1/10W
R611	1-216-672-11	METAL CHIP	7.5K	0.50%	1/10W
R612	1-216-066-00	METAL GLAZE	5.1K	5%	1/10W
R613	1-216-077-00	METAL GLAZE	15K	5%	1/10W

Ref.No.	Part No.	Description			
R614	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R615	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R616	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R617	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R618	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R619	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R620	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R621	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R622	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R623	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R625	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R626	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R627	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R628	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R629	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R630	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R631	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R632	1-216-080-00	METAL GLAZE	20K	5%	1/10W
R633	1-216-689-11	METAL CHIP	39K	0.50%	1/10W
R634	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R635	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R636	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R637	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R638	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R639	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R640	1-216-041-00	METAL GLAZE	470	5%	1/10W
R641	1-216-064-00	METAL GLAZE	4.3K	5%	1/10W
R642	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R643	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R644	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R645	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R646	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R647	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R648	1-216-029-00	METAL GLAZE	150	5%	1/10W
R649	1-216-001-00	METAL GLAZE	10	5%	1/10W
R650	1-216-001-00	METAL GLAZE	10	5%	1/10W
R651	1-216-001-00	METAL GLAZE	10	5%	1/10W
R652	1-218-231-00	METAL GLAZE	1		1/2W
R653	1-216-029-00	METAL GLAZE	150	5%	1/10W
R654	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R655	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R656	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R657	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R658	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R660	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R661	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R662	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R663	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R664	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R665	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R666	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R667	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R668	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R669	1-216-033-00	METAL GLAZE	220	5%	1/10W
R670	1-216-033-00	METAL GLAZE	220	5%	1/10W
R671	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R672	1-216-074-00	METAL GLAZE	11K	5%	1/10W
R673	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R674	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R675	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R676	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R677	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R678	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R679	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R680	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R681	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R682	1-216-029-00	METAL GLAZE	150	5%	1/10W
R683	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R684	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R685	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R686	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R687	1-216-117-00	METAL GLAZE	680K	5%	1/10W
R688	1-216-117-00	METAL GLAZE	680K	5%	1/10W
R689	1-216-025-00	METAL GLAZE	100	5%	1/10W
R690	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R691	1-216-109-00	METAL GLAZE	330K	5%	1/10W
R692	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R694	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R695	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R696	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R697	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R698	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R699	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R700	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R701	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R702	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R703	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R704	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R705	1-216-098-00	METAL GLAZE	110K	5%	1/10W
R706	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R707	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R708	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R709	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R710	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R711	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R712	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R713	1-216-025-00	METAL GLAZE	100	5%	1/10W
R714	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R715	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R716	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R717	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R718	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R719	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R720	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R721	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R723	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R724	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R725	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R726	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R727	1-216-033-00	METAL GLAZE	220	5%	1/10W
R728	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R729	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R730	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R731	1-216-049-00	METAL GLAZE	1K	5%	1/10W

Ref.No.	Part No.	Description
R732	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R733	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R734	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R735	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R736	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W
R737	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R740	1-216-121-00	METAL GLAZE 1M 5% 1/10W
R741	1-216-025-00	METAL GLAZE 100 5% 1/10W
R742	1-216-025-00	METAL GLAZE 100 5% 1/10W
R743	1-249-409-11	CARBON 220 5% 1/4W
R744	1-249-409-11	CARBON 220 5% 1/4W
R745	1-216-033-00	METAL GLAZE 220 5% 1/10W
R746	1-216-033-00	METAL GLAZE 220 5% 1/10W
R747	1-216-033-00	METAL GLAZE 220 5% 1/10W
R748	1-216-033-00	METAL GLAZE 220 5% 1/10W
R801	1-216-091-00	METAL GLAZE 56K 5% 1/10W
R802	1-216-190-00	METAL GLAZE 470 5% 1/8W
R803	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W
R804	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R805	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W
R806	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R807	1-216-629-11	METAL CHIP 120 0.50% 1/10W
R808	1-216-025-00	METAL GLAZE 100 5% 1/10W
R810	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R811	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R813	1-216-641-11	METAL CHIP 390 0.50% 1/10W
R815	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R816	1-216-093-00	METAL GLAZE 68K 5% 1/10W
R817	1-216-025-00	METAL GLAZE 100 5% 1/10W
R818	1-216-089-00	METAL GLAZE 47K 5% 1/10W
R819	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R820	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R821	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R822	1-216-009-00	METAL GLAZE 22 5% 1/10W
RV1	1-237-101-11	RES, ADJ, METAL GLAZE 4.7K
RV2	1-237-101-11	RES, ADJ, METAL GLAZE 4.7K
RV101	1-237-297-11	RES, ADJ, METAL GLAZE 500
RV102	1-237-101-11	RES, ADJ, METAL GLAZE 4.7K
RV103	1-237-298-11	RES, ADJ, METAL GLAZE 1K
RV201	1-237-297-11	RES, ADJ, METAL GLAZE 500
RV202	1-237-101-11	RES, ADJ, METAL GLAZE 4.7K
RV203	1-237-298-11	RES, ADJ, METAL GLAZE 1K
RV301	1-237-299-11	RES, ADJ, METAL GLAZE 2.2K
RV302	1-237-971-11	RES, VAR, CARBON 20KX4 (REC LEVEL)
RV303	1-237-972-11	RES, VAR, CARBON 20K/20K (VOLUME)
RV501	1-237-302-11	RES, ADJ, METAL GLAZE 47K
RV502	1-237-302-11	RES, ADJ, METAL GLAZE 47K
RV503	1-237-101-11	RES, ADJ, METAL GLAZE 4.7K
RV504	1-237-301-11	RES, ADJ, METAL GLAZE 22K
RV505	1-237-301-11	RES, ADJ, METAL GLAZE 22K
RV506	1-237-302-11	RES, ADJ, METAL GLAZE 47K
RV507	1-237-301-11	RES, ADJ, METAL GLAZE 22K
RV508	1-237-302-11	RES, ADJ, METAL GLAZE 47K
RV509	1-237-302-11	RES, ADJ, METAL GLAZE 47K

Ref.No.	Part No.	Description
S1	1-553-977-51	SWITCH, SLIDE (HOLD)
S2	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (PAUSE ▮▮)
S3	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (REC/INDEX ●)
S4	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (FF/CUE ▶▶)
S5	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(PLAY ▶)
S6	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(STOP ■)
S7	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (REW/REVIEW ◀◀)
S8	1-571-364-11	SWITCH, SLIDE (POWER)
S9	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(SCAN)
S10	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(⏮)
S11	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(⏭)
S12	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(CLOCK)
S13	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (RECORDED TIME)
S14	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(COUNTER)
S15	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(LIGHT)
S16	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE) (COUNTER RESET)
S17	1-571-365-11	SWITCH, SLIDE (LIMITER)
S18	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(SET)
S19	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(+)
S20	1-571-381-21	SWITCH, TACTIL (REFLOW TYPE)(-)
S301	1-570-134-11	SWITCH, SLIDE (MIC ATT)
S901	1-554-154-00	SWITCH, LEAF (SLIDER CHASSIS)
S902	1-554-154-00	SWITCH, LEAF (CASSETTE CONTROL FRONT CHASSIS)
S903	1-570-883-21	SWITCH, PUSH (2 KEY)(REC DET/SOFT TAPE DET)
S904	1-570-771-11	SWITCH (LIMIT DET)
S905	1-570-883-11	SWITCH, PUSH (2 KEY) (1.5 SPEED DET/CASSETTE DET)
SP901	1-503-866-11	SPEAKER
W1	1-565-179-21	HOUSING, CONNECTOR (FPC) 14P
W2	1-566-683-11	HOUSING, CONNECTOR (FPC) 10P
W3	1-565-178-21	HOUSING, CONNECTOR (FPC) 5P
W4	1-565-178-21	HOUSING, CONNECTOR (FPC) 5P
W5	1-566-683-11	HOUSING, CONNECTOR (FPC) 10P
W301	1-565-056-11	HOUSING, CONNECTOR 12P
W501	1-565-058-11	HOUSING, CONNECTOR 20P
W502	1-565-056-11	HOUSING, CONNECTOR 12P
W503	1-565-055-11	HOUSING, CONNECTOR 10P
W504	1-565-057-11	HOUSING, CONNECTOR 14P
W505	1-566-997-11	HOUSING, CONNECTOR (PC BOARD)
W506	1-565-056-11	HOUSING, CONNECTOR 12P
X1	1-567-098-00	VIBRATOR, CRYSTAL (32.768kHz)
X301	1-567-968-11	VIBRATOR, CRYSTAL (81.050MHz)
X501	1-567-967-11	VIBRATOR, CRYSTAL (4.190MHz)
X502	1-567-965-11	VIBRATOR, CRYSTAL (22.5792MHz)
X503	1-567-970-11	VIBRATOR, CRYSTAL (24.576MHz)
X504	1-567-966-11	VIBRATOR, CRYSTAL (18.816MHz)
Z1	1-550-104-11	HOLDER, BATTERY

ACCESSORY & PACKING MATERIAL

1-463-947-11	REMOTE COMMANDER
1-465-018-11	ADAPTOR, BATTERY CHARGE
1-551-734-71	CORD, CONNECTION (RK-C74)
3-345-024-01	CUSHION (UPPER)
3-345-025-01	CUSHION (LOWER)
3-345-036-01	BELT, CARRYING
3-345-037-01	CASE, CARRYING
*3-345-044-01	INDIVIDUAL CARTON (MAIN)
*3-345-045-01	INDIVIDUAL CARTON (LID)
3-701-629-00	BAG, POLYETHYLENE
3-703-708-41	STICKER, SONY SYMBOL (18)
3-769-507-11	MANUAL, INSTRUCTION
4-875-758-01	BAG, PROTECTION
8-810-090-00	MICROPHONE

9-953-089-11

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